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ISSUE DISCUSS:

Uniform Loom Settings
A Must for 18-oz. Serge
. . . See Page 104

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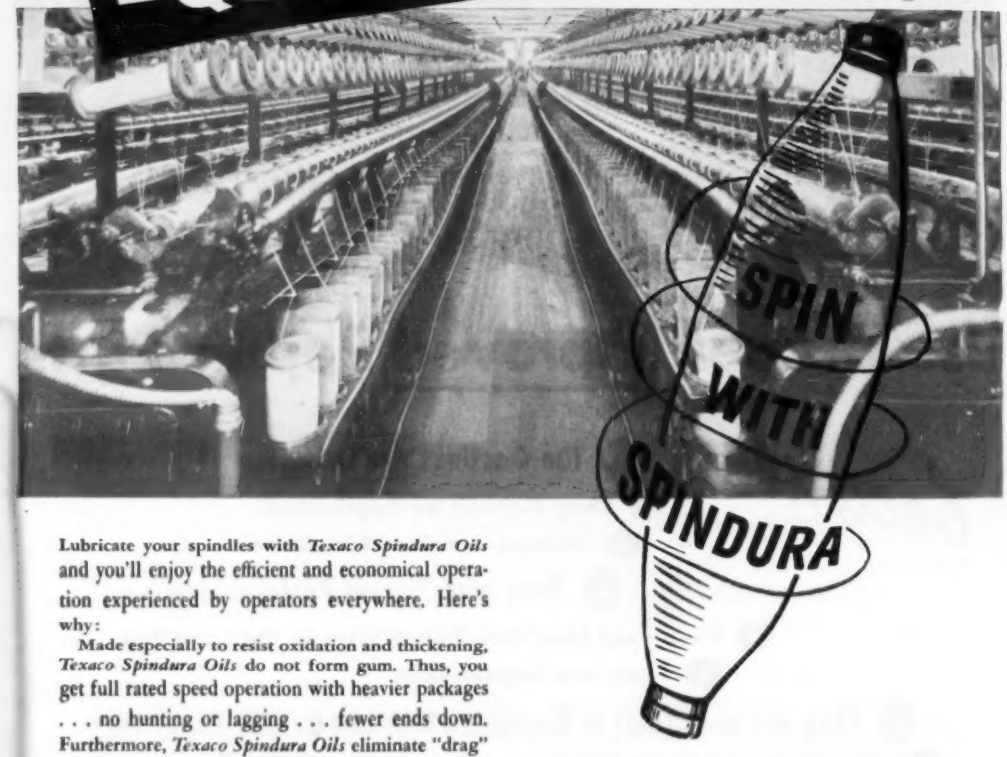

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THE *Long-Range* VIEW

EMIL RIEVE, president, TWUA (CIO): "I charge that there exists in the textile industry, primarily in the South, a widespread conspiracy to prevent union organization and to destroy those unions which now exist."

SEN. JAMES D. MURRAY'S subcommittee majority: " . . . the evidence goes far to reveal a widespread conspiracy to evade and nullify the Labor-Management Relations Act . . . The Congress of the United States will do well to heed . . . the pleas of organized labor . . . "

SEN. ROBERT A. TAFT'S subcommittee minority: "It [the majority report] could not be more one-sided if it had been written by the attorneys for the union which inspired the investigation . . . In our opinion, the majority and the staff which prepared the report have completely misconceived the policy of the United States Government . . . "

Will the CIO Never Learn?

It is difficult to discuss the so-called Southern conspiracy in moderate terms. We will not try to whitewash Southern mills in their relations with the CIO, and we will not cheer the CIO's methods. The thing we find most objectionable about the Senate subcommittee's investigation and the reports that followed is the obedience of the subcommittee majority to the CIO.

It is a reflection of the stature of some of our legislators that six Senators jumped through the hoop when Emil Rieve cracked the whip. The only face-saving feature of the whole thing is the courage of Senators Taft and Nixon to brand the majority report as sheer union subservience.

The gist of the majority report is that Southern mill managements resist the CIO; therefore, the Federal government ought to pass laws to remove this resistance. The gist of the minority report is that management, the community, and non-union workers have the right to resist unions; further, the right not to strike is as sacred as the right to strike.

A few facts stand out in regard to the majority report:

1. Workers, except as they serve the CIO's purpose, received no consideration from the six Senators who formed the subcommittee majority.

2. Resistance only to CIO unions was investigated. AFL unions were ignored.

3. Only cases where the CIO had lost were investigated.

4. Violence by CIO-union workers was approved, positively or silently. Violence by non-CIO-union workers was condemned.

5. Efforts by police and National Guard units to maintain order were condemned as strike-breaking. Court injunction to avoid violence was condemned as strike-breaking.

We feel certain that Emil Rieve blundered badly when he called his Senate cohorts into action this time. He has made public property the most damaging piece of anti-CIO-union publicity we have ever seen.

The four strikes investigated were fraught with violence: rock-throwing, kidnapping, fighting, shooting, overturning cars, dynamiting, and so on. The majority and minority reports and the NLRB hearings that preceded them picture the CIO in the worst possible light.

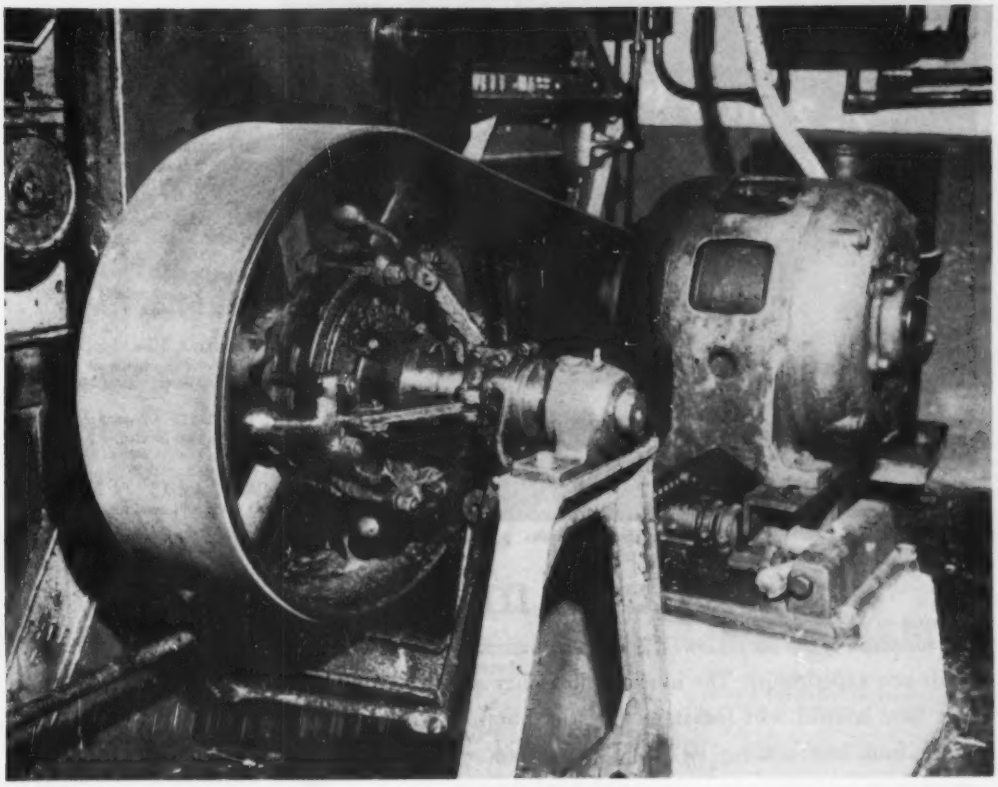
The majority report attempts to justify the CIO by proving that violence was instigated by the mills. The minority report tries to show that the unions were responsible for the violence.

So far as the CIO's reputation is concerned, it doesn't make any difference to the Southern textile worker which side instigated the violence. The worker's basic reasoning will be: To join the CIO is to join a striking union; to strike or not strike with the CIO means violence.

At that point the worker's reasoning stops. He has no wish to be involved in the CIO's peculiar form of violence.

It is no wonder that the Southern membership of the CIO textile union has dropped from 20% of the workers to 15%. Unless the CIO changes its methods, with or without its present leadership, we predict with confidence its complete failure in the Southern textile industry.

A. M. Thomas



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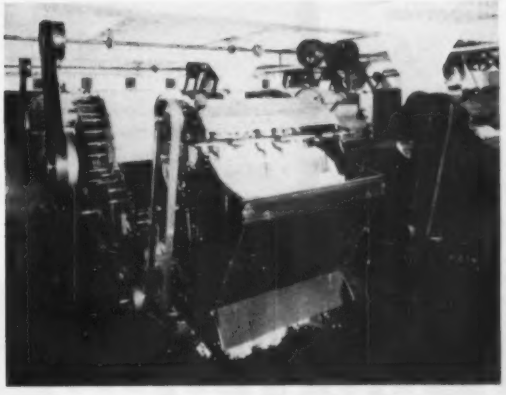

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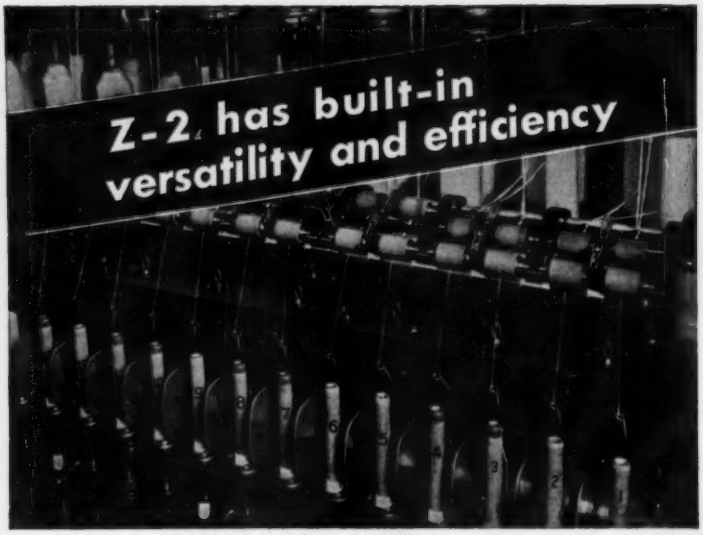

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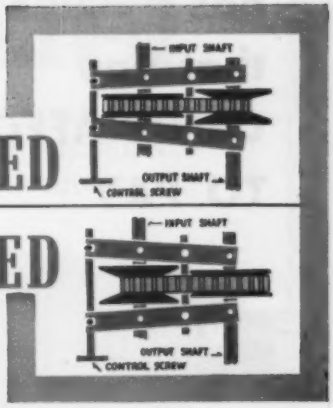

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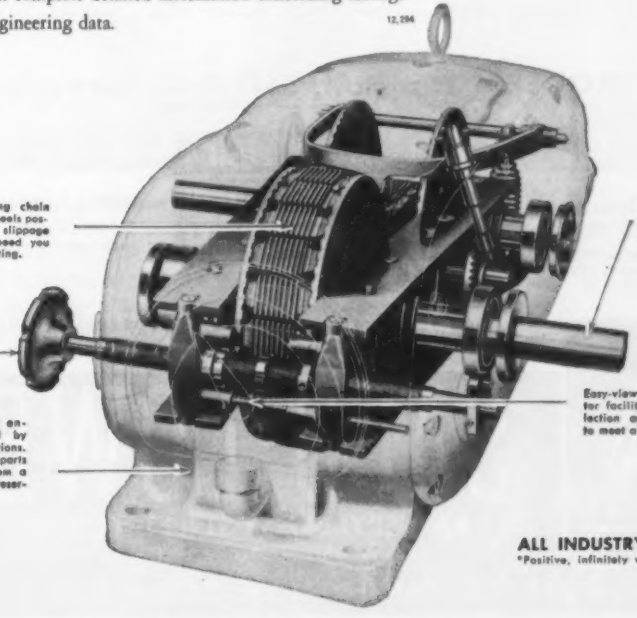

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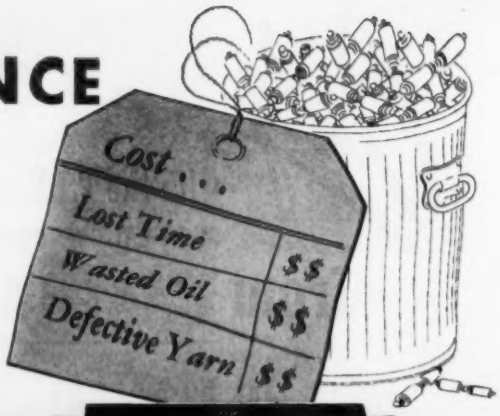

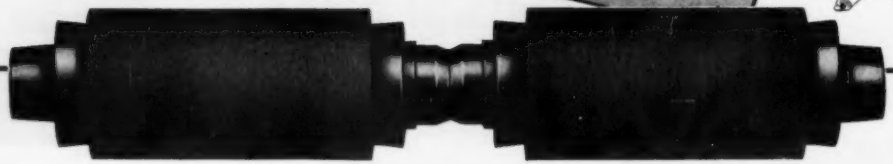

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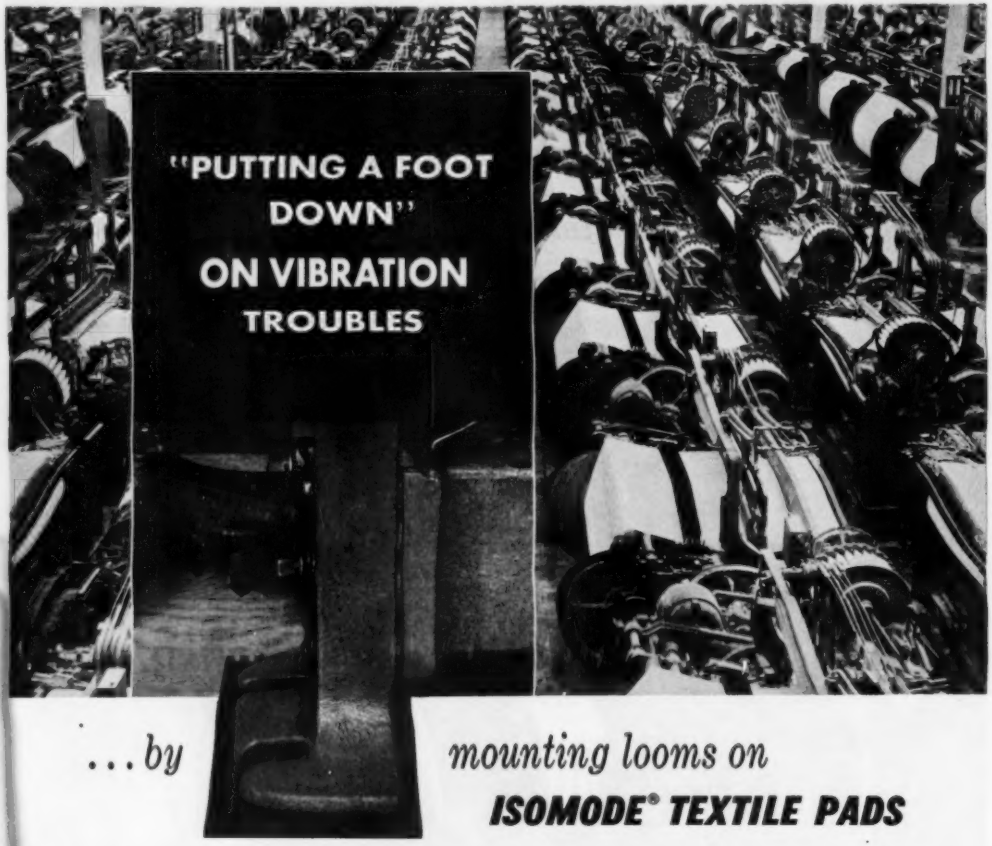

...by *mounting looms on* ISOMODE® TEXTILE PADS

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It's easy to install Isomode Textile Pads. Allowing ⅛ or ¼ inch overlap securely beds down loom legs on this resilient, ribbed, spring-like pad *without bolting!* You thereby end strains on looms, correct the effect of uneven floors—which helps to keep looms on the job longer.

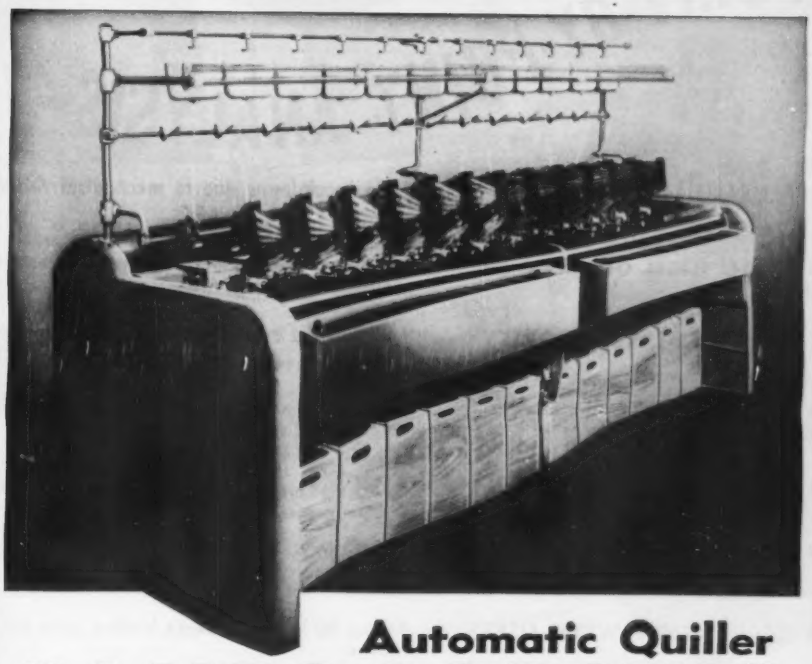
Discover how little it will cost you to install Isomode Textile Pads and gain the substantial benefits resulting from vibration control. Write for data and prices. **Trade Mark Reg. U.S. Pat. Off.*

THE MB MANUFACTURING COMPANY, Inc.
1084 State Street, New Haven 11, Conn.

Distributed by: Oliver D. Landis Co., Charlotte, N.C. • Standard Mill Supply, New York 1, N.Y. • Matthews Equipment Co., Providence, R.I. • R.B. Dorman, Atlanta, Ga. • Upton, Bradeen & James, Ltd., Toronto, Montreal, Vancouver, Canada

Schlafhorst

MACHINERY FOR WINDING AND WARPING



Automatic Quiller

"AUTOCOPSER"

For speeds up to 10,000 REVOLUTIONS PER MINUTE

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20 Years Experience in Automatic Quillers

For Particulars write to

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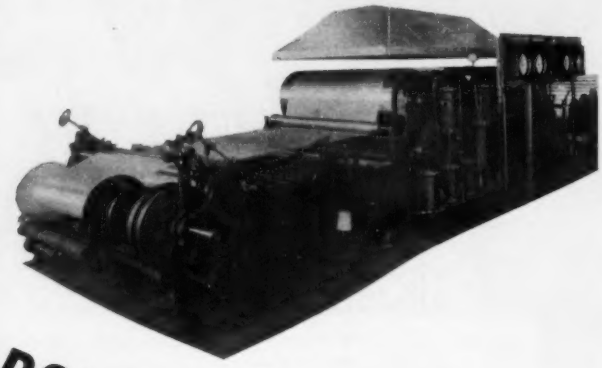
The JOHNSON All Fiber WARP SIZER



A POINT-BY-POINT ANALYSIS—

—FOR MAXIMUM PRODUCTION	◂ No breakdowns due to mechanical failures.
—FOR EVEN, HIGH QUALITY OF WARPS	◂ Efficient controls of heat, moisture, speed, and stretch indication.
—FOR TECHNICAL SUPERIORITY	◂ Engineered by specialists with 25 years' experience in meeting mill requirements.
—FOR SIMPLICITY OF OPERATION AND MAINTENANCE	◂ One main drive for entire machine.
—FOR UNIVERSALITY	◂ Efficient sizing of rayon, acetate, nylon, cotton, spun yarns, blends.
—FOR WORLD-WIDE ACCEPTANCE	◂ Used in U. S. A. and 30 foreign countries.
—FOR REPUTATION WITH USERS	◂ Over 90% of America's leading mills use Johnsons.

CHOICE OF EFFICIENT MILLS EVERYWHERE

Send for this 16-page illustrated booklet for a complete point-by-point analysis

Charles B. Johnson

PATERSON, NEW JERSEY

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You can't beat this Wool Oil Deal!

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Scientific Analysis
A S/V engineer uses special instruments (like this moisture meter) to analyze mill operations.
K
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After analysis, S/V engineer prepares report, with recommendation of correct wool oil.
Q
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Recommended from complete line, meeting all degrees of scourability and discoloration resistance.
3000
2000
SS
1500
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J
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Technicians in S/V laboratories make tests of mill samples to control performance on the job.
10
Progress Reports
Show efficiency of fiber lubrication, make recommendations for still further improvement.

Why accept less for your mill?

You always deal yourself a winning hand when you use our fiber lubrication service and complete line of S/V Woolrex Oils. Our line-up of products includes both premium and low-cost oils to meet any desired degree of scourability and discoloration resistance. Each oil does the finest job possible—*on a price-performance basis!* Why not enjoy all five benefits of this exclusive wool oil service?

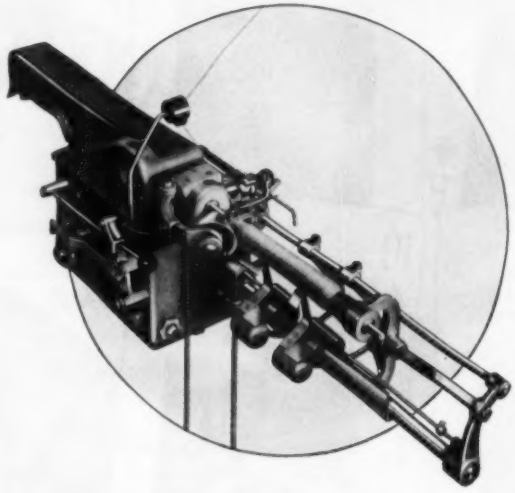
Socony-Vacuum Process Products

Process Products
SOCONY VACUUM

SOCONY-VACUUM OIL COMPANY, INC.
Chemical Products Division, 26 Broadway, New York 4, N. Y.

Schweiter

AUTOMATIC HOLLOW COP WINDER TYPE MT



The Automatic Hollow Cop Winder Type MT fills the need for a highly productive labor-saving machine for winding jute, hemp, paper, carded wool or any other coarse textile fibre.

Each spindle is a small machine in itself and is easily adjustable for length of cop, diameter and traverse length. All shafts, and the feeler cone building up the cop, run on ball bearings. Progressively acting three-disc-tension is provided, and a fool-proof safety device automatically stops the spindle if any obstruction to smooth running occurs.

An electric motor with 4-stage V-belt pulleys permits four different spindle speeds at each crossing.

GIVES MORE YARN LENGTH IN THE SHUTTLE AND DECREASES LOOM STOPPAGES

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HORGEN (Zurich) Switzerland

Exclusive Agents for the United States and Canada

WHITIN MACHINE WORKS • WHITINSVILLE, MASS.

to save caustic and bleach
in the faster open boil-off
of cotton grey goods . . . add ¼%
Nacconol®
AMERICA'S LEADING SYNTHETIC DETERGENT

Mill results confirm carefully-conducted tests that show you can cut costs three ways by adding as little as ¼% NACCONOL to the boil-off liquor:

1. ***Save Caustic:*** **A 1% Caustic plus ¼% Nacconol solution can be as effective as much higher alkali concentrations without NACCONOL.**
2. ***Save Bleach:*** **Cleaner, wax-free goods cuts bleach-solution consumption.**
3. ***Save Time:*** **Satisfactory boil-off can often be obtained in less than half the time.**

send for technical bulletin

National Technical Bulletin #311 contains 12 pages of significant test results on this important way to save time and money on boil-off operations. For your copy, write, wire or phone our nearest office.

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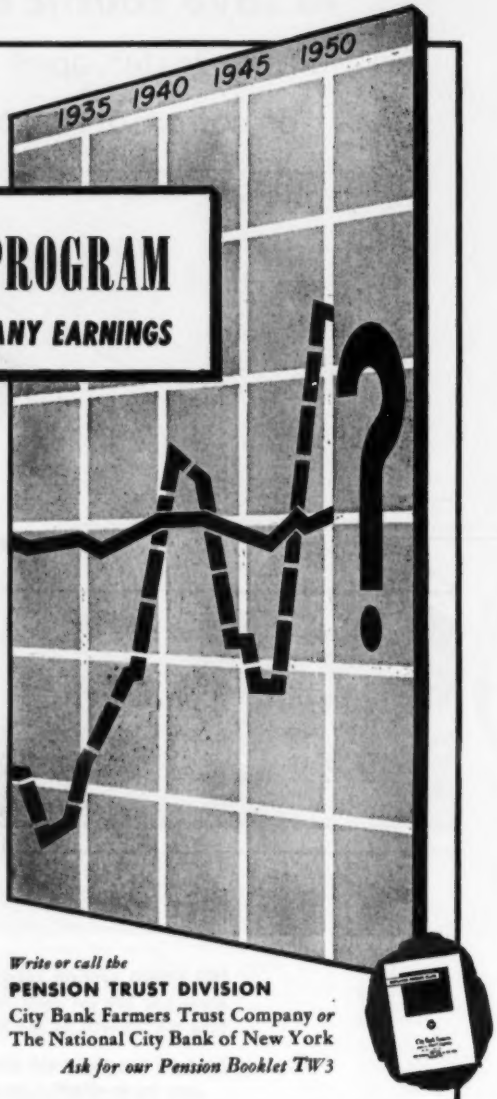
Patterns in Pensions

YOUR RETIREMENT PROGRAM

SHOULD BE GEARED TO YOUR COMPANY EARNINGS



IF your company
EARNINGS ARE STEADY

Your company probably can afford the permanent commitment of an adequate pension system.

IF your company
EARNINGS ARE ERRATIC

Your company probably can best solve the retirement problem through a deferred profit-sharing trust—or a combination of a modest fixed pension commitment plus a profit-sharing retirement plan.

FIND OUT what plan
BEST fits your business

Let us help you with complete analyses, including cost estimates. There is no obligation, of course.

Write or call the
PENSION TRUST DIVISION
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ESTABLISHED 1812

SANDOZ PRESENTS *The color achievement of the month*

Blithe Blue ...BY MILLIKEN

This cheerful worsted-wool dress crepe by Milliken brightens spirits everywhere it goes.

She knows its color will stay bright — despite sun exposure — for many seasons to come, because she depends upon Milliken to have used the *very best* dyestuffs.

The *dyer* is pleased with the fine performance he gets from Sandoz dyestuffs because they are level-dyeing, and changeless in subsequent finishing operations.

To keep seconds in the dyehouse down to a minimum and to insure customer satisfaction, smart dyers are depending more and more, for colors like this, upon such Sandoz favorites as

ALIZARINE LIGHT BLUE 4GL

and the new "super-brilliant" blue —

BRILLIANT ALIZARINE LIGHT BLUE 3F Pat.

For maximum fastness to light, washing and perspiration, Sandoz has announced another brilliant blue —

BRILLIANT ALIZARINE SKY BLUE 2GS

Ask for a product sample and circular #940-50.

And for *any* chrome, acid or direct dyes . . . or auxiliary chemicals . . . for both natural and synthetic fibres . . . be guided by the successful "color achievements" you see in these Sandoz advertisements.

DIRECT DYE COTTONS AND RAYONS—GET TRIPLE FASTNESS THIS NEW WAY!

Sandoz CUPROFIX colors and after-treatment give results comparable to more expensive vat dyeing.

Only with CUPROFIX can you expect direct-dyed fabrics to have satisfactory fastness to *sunlight* as well as to laundering and perspiration.

Works wonders with resin-treated fabrics. Write us for new booklet on popular CUPROFIX.

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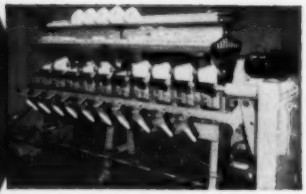
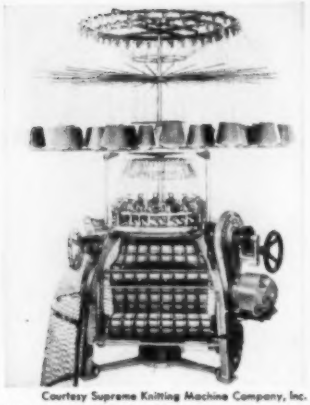
SANDOZ *thinks ahead with textiles*

YARN WOUND ON [illegible] ROTO-CONER*

Improves Results



IN THE [illegible]EXT PROCESS

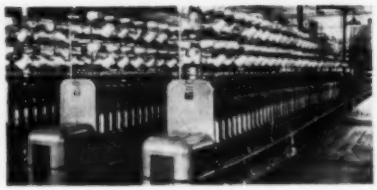


Courtesy Supreme Knitting Machine Company, Inc.

IN THE KNITTING MILL:

Fewer Press-Offs

Many knitters *specify* Roto-Cones because all imperfections have been removed by slubbing to provide perfect running conditions on the knitting machine. The increasing taper allows high-speed delivery without sloughing. And, with less breakage of short fibers, due to the Roto-Coner's* smooth one-piece rotary traverse, the yarn is *loftier*.



IN THE TWISTING DEPARTMENT:

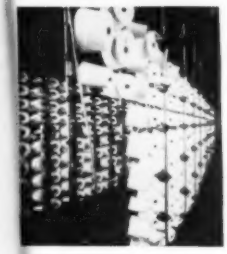
Doubling Eliminated

Doubling prior to twisting is eliminated when the Universal Roto-Coner* is used in conjunction with Atwood Model 10 Ring Twisters. Single end winding is faster than doubling. The cones (9° 36′, 9° 15′, or 3° 30′) are used as a supply for the Model 10 which, being equipped with single end stop motions, makes preliminary doubling unnecessary.

IN THE QUILLING DEPARTMENT:

Improved Quality

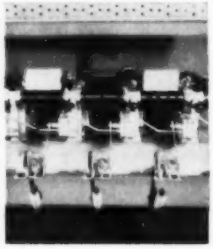
Automatic filling winders run without interruption from magazined cones. Accurate inspection, on the Roto-Coner*, of yarn wound from spinning bobbins increases loom efficiency and fabric quality.



IN THE WARPING DEPARTMENT:

Continuous Supply

Maximum warping efficiency can be obtained only from large packages of thoroughly-inspected yarn. Many mills today use Roto-Cones as a supply for their high-speed or jack spool warpers.



IN THE DYEHOUSE:

Even Penetration

Dyers consider that packages wound on the Roto-Coner* are superior for any system of dyeing. Soft packages are wound at 325 to 500 ypm with uniform density throughout and from spindle to spindle.

ROTO-CONER* THE FLEXIBLE WINDER

The Roto-Coner* winds a complete range of staple yarns onto a variety of package shapes and sizes. Rotary traverses are made in four standard groove arrangements and from either Bakelite or cast-iron.

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ROTO-CONER* WINDER *The Textile Winder with the Rotary Traverse*

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We're READY with quality soaps for every textile need! You can always find the right soap for the job in Swift's complete line. Whether you need soaps for dyeing, fulling or scouring or any other specialized need, Swift's Soap Department is at your service. And you'll find that Swift's Soaps for textile uses have maximum uniformity of composition and excellent physical form. You can't buy finer soaps anywhere.

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Cut down paper work!

No need to search catalogs, put all your mill supplies on one order to Atkinson, Haserick & Co. We will ship every item in the quickest possible time. Make us responsible for stockroom replacements *and* rush parts. Mail, wire or phone your troubles to us.

Get all mill supplies on one order!

Bobbins: American & English
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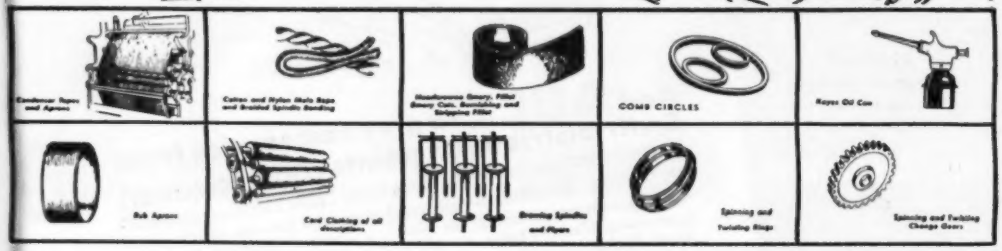
Spindles: Rabbeth & Ball Bearing
Tapes: Twisting & Spinning
Thread Spools, Wooden
Top Rolls: Ball Bearing & Ordinary
Yarn Guides, Plastic and Porcelain



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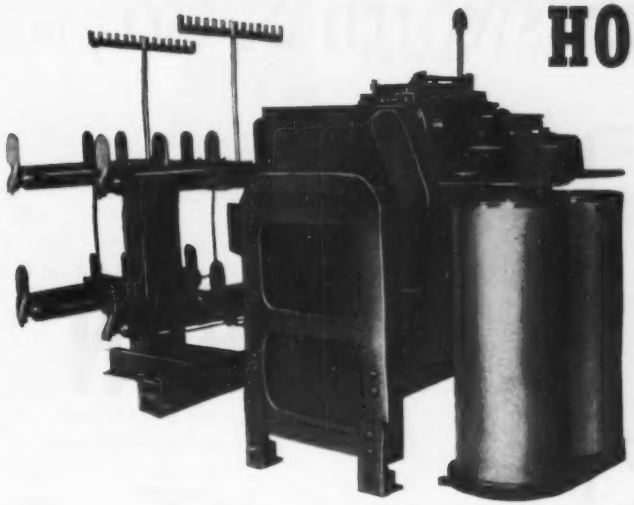

HOLDSWORTH Gill Reducer

Simplicity pays-off...

For The OPERATOR

Fewer red-lights! This machine just keeps running and running. Mechanical simplicity reduces the chance of stoppages; makes maintenance easier. For instance, the screws are pretimed at the factory and *remain* that way when the head is opened for cleaning or faller replacement. With each new installation, a Holdsworth factory man works with your operator, insuring initial optimum production.

For MANAGEMENT

Except for daily reports of top quality production, you will almost forget you have Holdsworth Gill Reducers running. Streamlined designing, well machined parts and a sturdy frame keep them off the worry list.

For The INVESTORS

Two end deliveries for the price of only *one* machine! The price is the lowest in the field, too. Production per machine, per dollar invested is greater than was previously attainable. Although the Holdsworth Gill Reducer has been on the market only a year, the greater percentage of orders on hand are re-orders from mills now operating test installations! What better reason could you have for investigating this machine yourself? Write or phone us for full data.

Español

El diseño simplificado reduce los riesgos de parada en el trabajo; hace más fácil la conservación. Los tornillos permanecen engranados cuando se levanta el cabezal. Bastidor resistente y piezas elaboradas a máquina.

Una máquina produce dos entregas. Es la máquina de menor precio en el ramo. La mayor parte de nuestros pedidos son repetidos de fábricas que trabajan actualmente instalaciones de ensayo. ¿Nos permite enviarle datos completos?

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WOOL WASHER

May we send you full production data and specifications?

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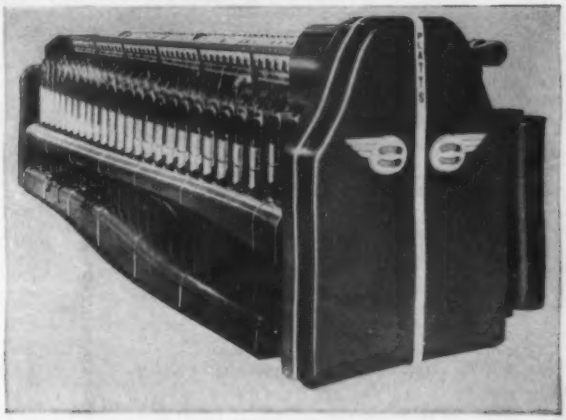
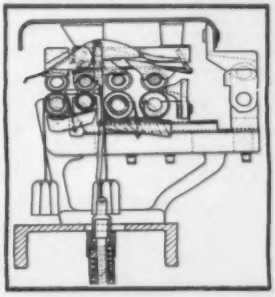
STRONGER ROVING
fewer ends down...

New Patented Hartley Flyer inserts more twist between the top of the flyer and the nip of the front roll. A stronger roving results with a higher production and a lighter work load.



PLATT'S M·S·2 HIGH DRAFT ROVING FRAME

At our Charlotte display rooms, you can see the M.S.2 Frame in operation and examine its well engineered features: The headstock is neat, compact and smooth in appearance, allowing easy access to the gearing and twist change-gears. The silent spindle and bobbin drive has a chain drive to the spindle and bobbin shafts with helical cut gears to each individual spindle and bobbin. Balance of bobbin rails, centralized lubrication, roller gearing, roller weighting, assisting rollers, measuring motion controls, guards and locking motions have all been well designed to be compact and accessible.



The TRIZONA (Trade-Mark) Drafting System employs a progressively controlled drafting which is the answer to the problem of fiber control in each critical drafting field. The patented guide units provide complete control of the fibers. The three drafting zones permit a wide range of drafts. We would be glad to send you a very interesting twelve page booklet with detail illustrations and comparative graphs of roving regularity.

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Shown here: 3-cylinder set, with Peralta Machine. Also available in 2-cylinder and 4-cylinder sets.

Duesberg-Bosson Automatic Card Feeder

SIZE: either 78¾" or 72¾" wide, to match the dimension of the carding machine.

IMPROVED FEEDING MECHANISM: enables weight and settings to be kept within a minimum for prolonged periods.

HOPPER: large. Giant size hoppers can be had if desired.

SPIKE APRON: constructed entirely of metal, with tapered steel pins. Take-up sprockets maintain tautness.

SPIKE APRON STRIPPING COMB: heavy duty type, precision made, accurately balanced; not subject to vibration or backlash at stripping comb speeds.

SCALE PAN: sensitive weighing device automatically prevents overweighing of stock.

Duesberg-Bosson
WOOLEN CARD

Many advantages are being obtained by every woolen mill using this *modern carding machine.*

1. Substantially greater production.
2. Noticeably improved quality.
3. Greater blending of fiber and colors, due to increased doublings.
4. More uniformity of roving.
5. Increased lengths of fiber can be used.
6. Card flyings and waste held to a minimum.
7. Less re-workable waste.
8. Vibration practically eliminated.
9. Less down-time. Fewer repairs.
10. Lower power requirements.
11. More efficient lubrication.
12. Less capital investment.

CATALOGUE AVAILABLE ON REQUEST

For those who may be interested in seeing tangible evidence *on their own stock* of the superiority of the Duesberg-Bosson Card, we shall be glad to demonstrate the operation of this card. We will process sample lots at our mill, **Duesberg-Bosson Woolen Spinning Company** at Jefferson, Massachusetts (near Worcester). At this mill we are in a position to pick, card, spin, and wind on cones.

Duesberg-Bosson of America, Inc.

Manufacturers of Woolen Machinery, Developed from a Background of Over 115 Years

FITCHBURG ★ MASSACHUSETTS

I put an idle wall to work and cut my painting costs

I got the idea from a Barreled Sunlight representative. "Painting costs", he said, "are never determined by the cost of paint per gallon. It's the *amount* of paint you have to buy . . . and of far greater importance, the amount of *labor* it takes to put it on."

To test this idea, I bought a gallon of Barreled Sunlight and compared it with a gallon of the paint I was using. Each was thinned according to directions on the can, and my painter applied each on an idle, out-of-the-way wall in my building. Right away I saw that Barreled Sunlight gave me more paint ready for the brush. It gave me more yardage on the wall... looked much better after drying . . . and took far less time to apply.

This test convinced me that for a longer lasting, better looking paint job at lower cost for both paint *and* labor, Barreled Sunlight is the answer. Let your Barreled Sunlight representative help *you* make such a test on one of *your* idle walls. Write — and he'll call.

BARRELED SUNLIGHT PAINT CO.
20-F Dudley St., Providence, R. I.

Barreled Sunlight *Paints*

In whitest white or clean, clear, pleasing colors, there's a Barreled Sunlight Paint for every job

Modernize-

...with Variable Speed Drives

To get the most out of your mill, add low cost, dependable *TEXROPE* Variable Speed Drives

THE SIMPLE ADDITION of new variable speed drive equipment has helped greatly in bringing mills, like the one shown here, back into the competitive picture Best of all, the cost is moderate.

Engineers experienced in textile mill drive applications can help you study your set-up and variable speed drives can answer your needs.

Whether you need to change speeds while your machines are shut down or in motion, there's a *Texrope* variable speed drive for the job. You'll like these drives for their quick, easy and accurate speed changing; silent operation, and smooth cushioned starts that reduce thread breakage.

Texrope drive engineers are well qualified to advise you. They have the added skill that comes from having made more industrial V-belt installations than any other manufacturer.

In addition, the *Texrope* drive line offers everything you need in V-belt drive components. Call your nearby Allis-Chalmers District Office, or write, Allis-Chalmers, Milwaukee 1, Wisconsin. . A-3382

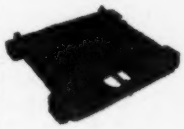
VARI-PITCH SHEAVES

Vari-Pitch Standard sheaves have speed range of 9% to 28% . . . use A, B, C, D, or E belts, *Wide Range* sheaves have 2 to 1 speed range . . use Q and R belts. Both available in stationary and motion control types. *Vari-Pitch* Automatic Sheave has 2 to 1 range. Changes speeds while motor is running.

VARI-PITCH SPEED CHANGERS

You get smooth, accurate speed control at the turn of a handwheel. You operate your machine at exactly the right speed for highest production. Enclosure keeps lint and dirt out of speed changing mechanism. Stepless speed range 3¾ to 1. Capacity 1½ to 75 hp.

TEXSLIDE MOTOR BASES



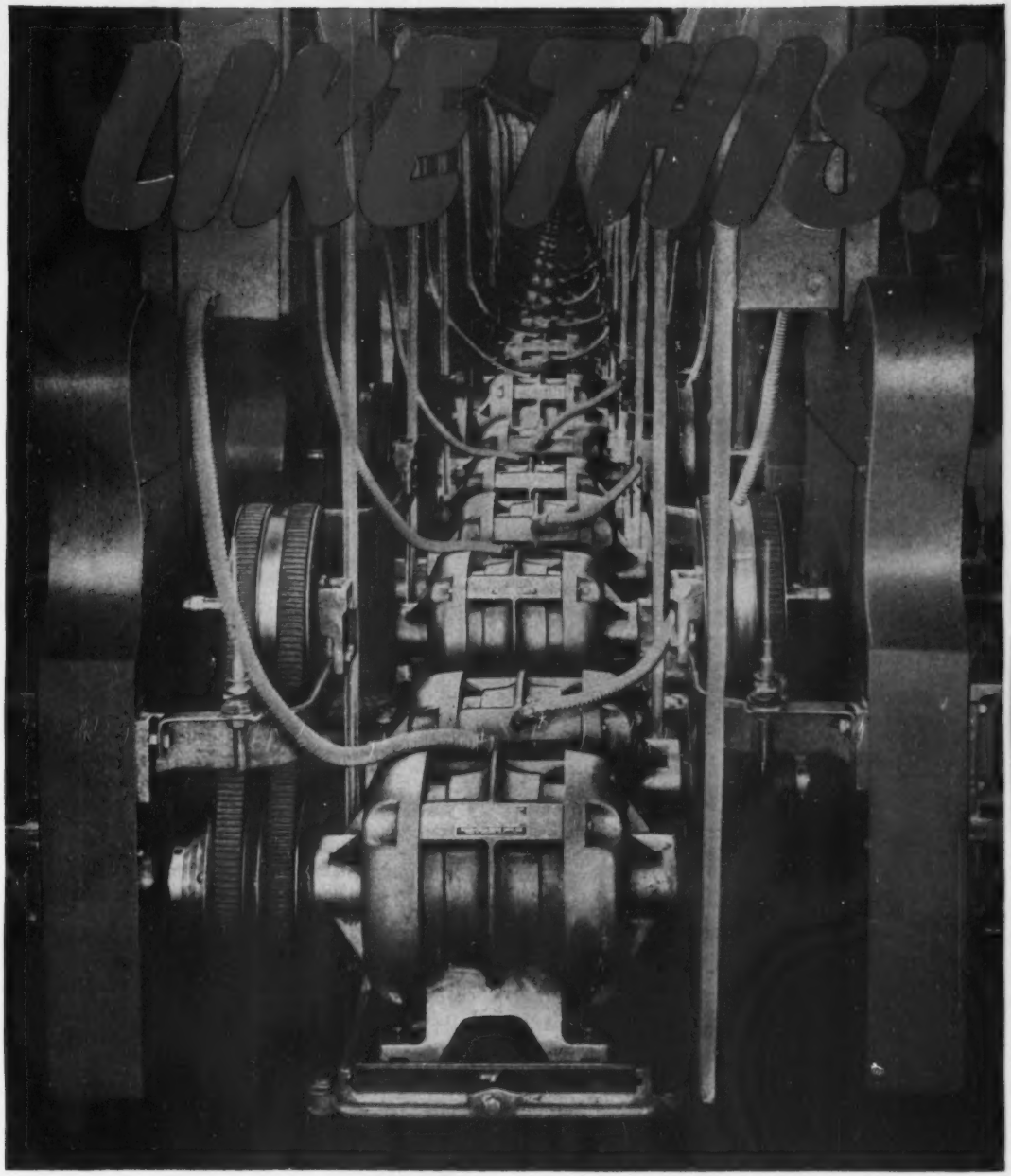
These bases are used only with wide range *Vari-Pitch* drives, since wide range drives require considerably more take-up than standard *Vari-Pitch* drives. The base provides adequate movement to compensate for belt stretch and for changes in center distance when adjustments of pitch diameter are made. It consists of plate sliding in machined slots.

TEXROPE
Greatest Name in V-Belt Drives

Texrope, Vari-Pitch and Texslide are Allis-Chalmers trademark.

ALLIS-CHALMERS

Originator of the Multiple V-Belt Drive for the Textile Industry



COMPLETE SERVICE from power line to machine

Transformers

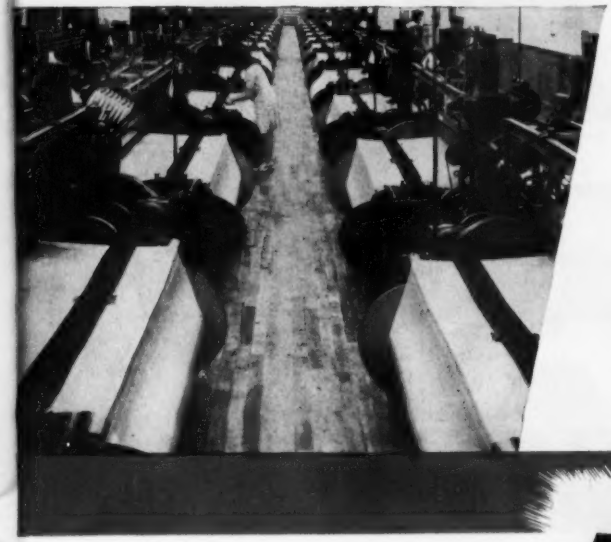
Motor Control

Motors

Texrope Drives

A-C ALLIS-CHALMERS

"How Productive can an old loom be?"



Maybe your looms are not as old as you think! It is most likely that the Wilson way of loom renovation will bring about the increased production you want, whether your looms are ten, twenty, or even forty years old. The Emil V. Wilson Co. has successfully accomplished weave room modernization programs from New England to the Gulf Coast. Their surprisingly economical services include overhauling by experts, replacing worn parts, installing attachments where wanted, and alteration for weaving new constructions . . . right on the mill's own floor, with a minimum of interruption. For information about your own needs, wire, write, or telephone today.

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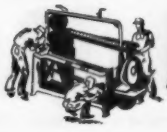
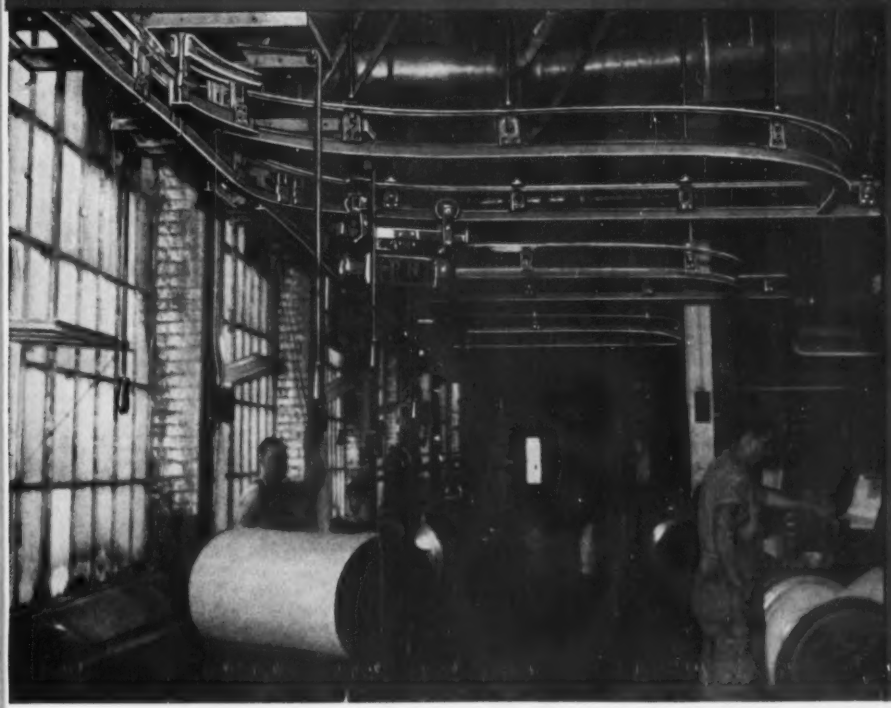


Emil V. Wilson Co., Inc.
1210 NEW BUNCOMBE ROAD PHONE 3-3643
Greenville, South Carolina

Overhead handling with Louden MONORAIL is the trend in modern mills



. . . lap handling from pickers to cards

. . . beam handling to and from the slashers

. . . weave loom beam to and from tying-in machine

. . . loom beam handling in the weave room

. . . roll or bale handling in finishing

. . . beam and cloth handling in the dye house

Automatic Ceiling Cleaner

Just push the control button and let the Louden Automatic Ceiling Cleaner do the rest. As it travels around the room on its overhead Monorail track, the Louden Cleaner alternately sweeps right and left to keep ceiling, lights, piping, ducts free of lint. Write for details today.

Greater safety, greater efficiency and lowered labor and maintenance costs . . . These are the chief reasons so many rayon and cotton textile mills are now being equipped with Louden Overhead Handling Systems. Machines can be spaced closer, more beams can be stored by higher stacking, a new orderliness is possible with Monorail.

Workers, too, respond enthusiastically to the electric-hoist, easy-push Louden systems that simplify lap handling from pickers to cards, beam handling to and from slashers, weave loom beam to and from tying-in machine, loom beam handling in the weave room, roll or bale handling in finishing, and both beam and cloth handling in the dye house.

Louden Overhead Handling fits almost every department of the mill. In fact, the Monorail System can provide unification for the entire operation. Write today for new, free, illustrated book, "Economical Material Handling".

MODERN TEXTILE MILLS USE

Louden

OVERHEAD MATERIAL HANDLING

THE LOUDEN MACHINERY COMPANY • 301 COURT STREET • FAIRFIELD, IOWA

"Whether there be Prophecies, They Shall Fail"

. . . those words, spoken by a redoubtable seer nearly 2000 years ago, have probably never been so pertinent as they are today. For today's most carefully computed prediction may prove completely false tomorrow. *We* certainly are not attempting to prophesy anything, but are simply keeping "our noses to the grindstone" doing all we can to provide the textile industry with top quality chemicals that assure better and more economical processing, and *superior products.*

The pictures shown here join with our headline to emphasize this message we would leave with you: *Whatever the uncertainties ahead, you can do no better than call upon the experience, skills and facilities accumulated by Nopco*.*

One of the oldest and most reputable suppliers of processing chemicals, we are prepared to supply you with outstanding Nopco FUA, an extremely versatile and efficient wool oil; Nopco 1656-R, the *one* worsted lubricant that eliminates static; nylon coning oils, dyeing penetrants; synthetic detergents and wetting agents; silk and rayon throwing oils; and the many other textile products for which we are famous.

As you go to work today in the interests of national defense, remember, too, that we are ready to make recommendations and supplement laboratory data with technical aid right in your mill. It will remain our fixed policy to serve you to the best of our ability, *come what may.*

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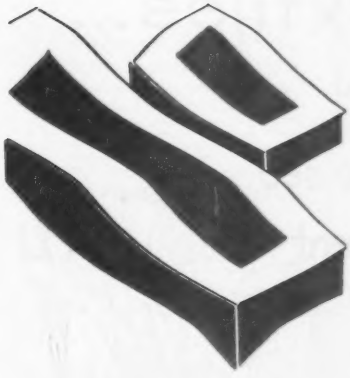

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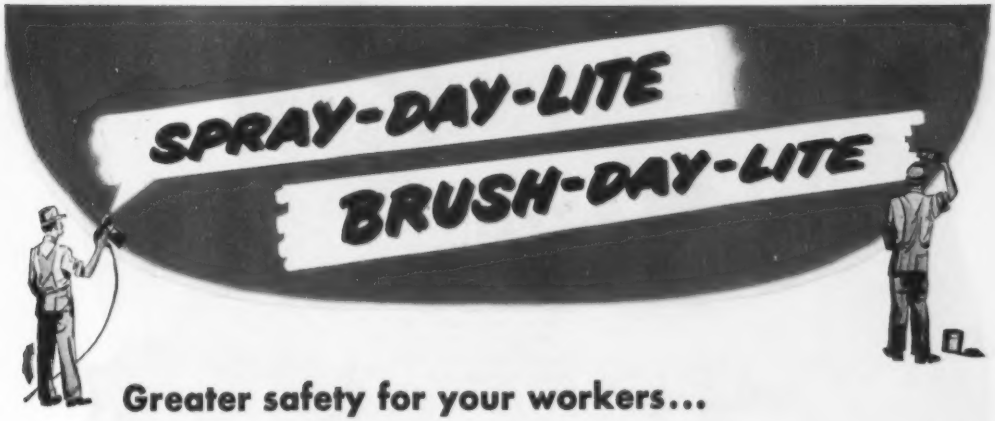

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COLOR SERVICE

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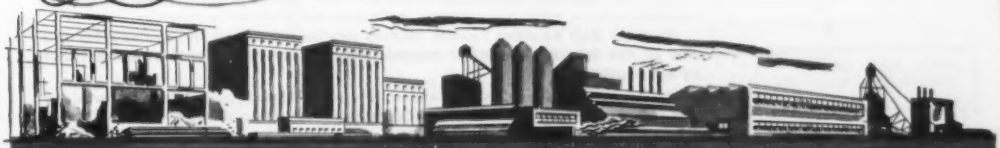
A service comprising detailed color suggestions tailor-made for you by trained consultants from Glidden Color Laboratories with over 21 years of experience. These comprehensive color harmony plans for interior painting based on Glidden's famous Sight Perfection Program pay important extra dividends! For complete information about this free service, write Dept. C-6.

Just one coat of Glidden SPRAY-DAY-LITE or BRUSH-DAY-LITE provides the maximum in light reflection and diffusion. Lighting efficiency is increased—workers see better, feel less fatigue, have *fewer accidents.* Painting this way also helps to improve morale, stimulate production. And one coat is good for years because SPRAY-DAY-LITE and BRUSH-DAY-LITE provide a tough, durable finish that can take repeated washing. Now, as critical shortages make savings in time, labor and material so important, try *one-coat* painting with America's largest-selling interior maintenance paint!



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Century Textile motors are ruggedly built for long service life.

TEXTILE MOTOR SHEDS LINT

-677

- STREAMLINE DESIGN
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Smooth clean air passages permit cooling air to enter the motor through the end brackets. This steady blast of air circulates near the bearings, around the windings and out through the adequate air passages in the frame.

Lint and textile dust pass through the motor readily, without clogging. This results in clean radiation surfaces, which means that the motor operates at normal temperature.

Century Ball Bearing Textile Motors are lubricated at the factory for the life of the lubricant — under normal service, this is several years without re-lubrication.

However, evaporation or oxidation due to high temperature determines the ultimate life of the lubricant. Century construction permits re-lubrication, when required, without dismantling.

In addition to textile motors, Century builds a complete line of electric motors in sizes from ⅛ to 400 horsepower. They are available in open rated drip proof, splash proof, enclosed fan cooled and explosion proof frames to meet any atmospheric hazard.

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Step up production and don't add a man

Equipment breakdowns stop the steady flow of production. Eliminate breakdowns and you increase production without adding a man.

A Kardex Visible Maintenance System *automatically* indicates which machines need preventive attention. You route maintenance men to the right job, on the right machine, at the right time.

Here's how the system works. Experience and performance are combined to set up a tested, inspection schedule. Kardex colored signals indicate . . . *automatically* . . . those items due for inspection. A "Floating Inspector's" record is withdrawn from the Kardex pocket, filled out with instructions specific to the checkup to be performed, and routed to your maintenance men as a work order and report sheet.

When the maintenance job is complete, the maintenance man checks off what he did and the card is returned to its place, *automatically* signaling job completion. Then, the Kardex signals are advanced to the next date specified.

The quick result: *less* clerical help and a minimum of time-wasting paperwork, thanks to the "Floating Inspector's" record.

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Of course, he's talking about his

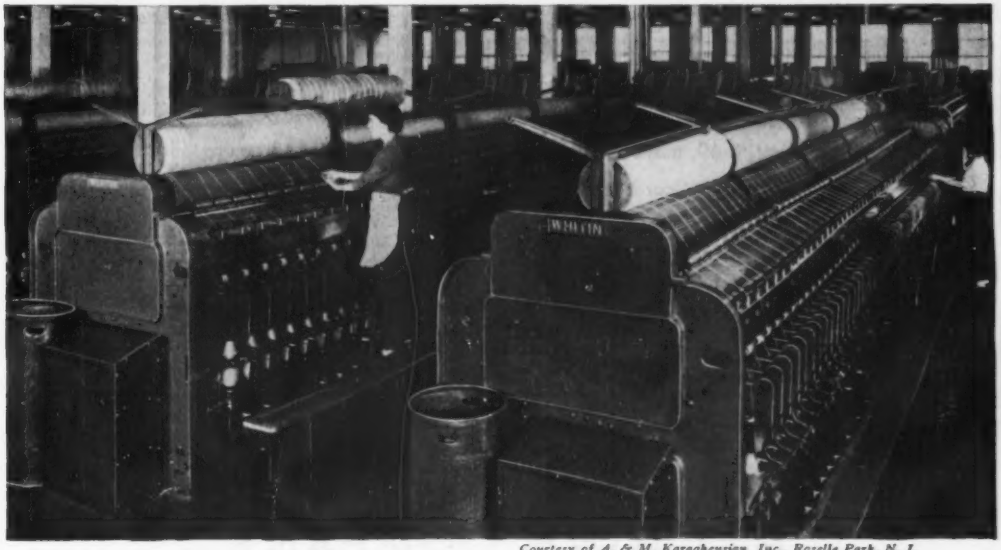
WHITIN Wool Spinning Frames

This is not an isolated case — mill men in all branches of the woolen industry have enthusiastically reported similar results.

The Whitin Model "E" incorporates the latest advances that have been made in ring frame spinning, and includes in addition, a number of exclusive features. Simple in design, yet carefully and ruggedly built, these frames are made to give many years of dependable service at a high rate of production.

This frame makes large package spinning practical, decreases direct costs in spinning, spooling, sewing and burling while producing stronger yarns and higher loom efficiency, which contributes toward lower costs in subsequent operations.

Whitin Model "E" frames may well be the answer to your wool spinning problems. Why not investigate?



Courtesy of A. & M. Karagheusian, Inc., Roselle Park, N. J.

Write today for descriptive literature on Whitin Model "E" Wool Spinning Frames.

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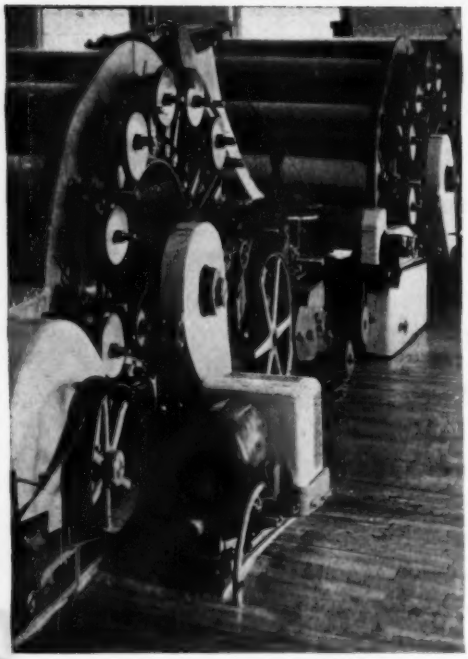

Less Lubrication downtime means more cloth to sell

• On a well maintained woolen card, lubrication downtime should amount to 60, maybe 75 hours a year. With our new Model 'L' card, we've cut this lost time to only 8 or 10 hours annually.

This gives your new card a full week and more of "bonus production", yielding more and more roping . . . adding thousands of yards of cloth, yearly, to your potential sales picture.

Fewer lubrication periods also mean less yardage lost through possible grease spoilage, while direct costs of both labor and oil involved are further reduced. As a result, the dollar savings of the Model 'L' on this one big feature alone . . . lubrication . . . loom large in any card room adjustment program.

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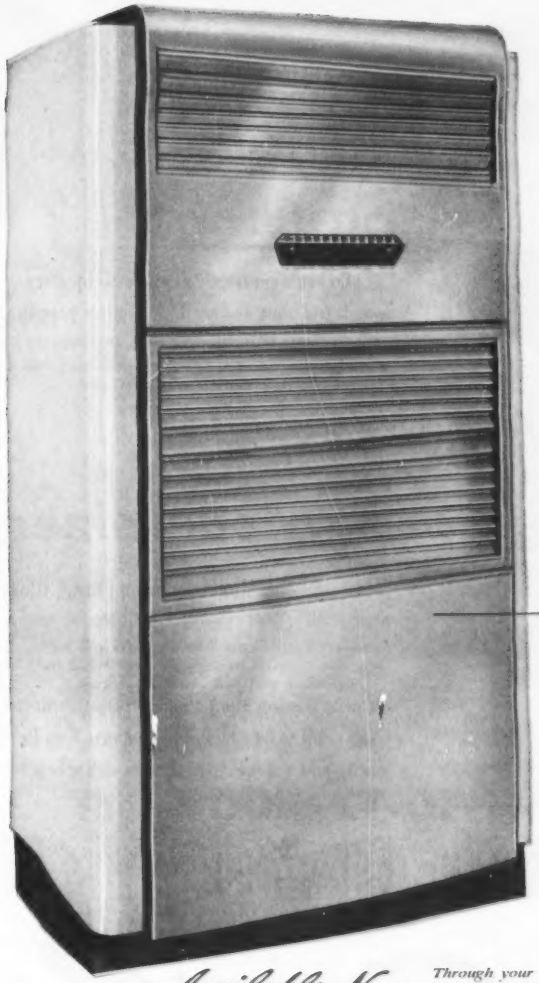

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Can't get 'em up on Monday?

If you can't get frame production up after week-end shut downs, due to bands popping off, or waste from slack bands, or from sticky wooden-bearing tape tension pulleys,—do as scores of other mills have done, and

get Meadows Modernizers

and you'll end Monday-morning band, sticky tape-pulley, and cylinder troubles *for keeps!*... Convert your frames to tape drive with Meadows individual drive pulley and ball-bearing tape tension pulleys, and be assured of even tension at *all times*—a more uniform speed and twist—fewer ends down. Can be easily and quickly installed on either band-driven or old-style tape driven frames.

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. . . AND THIS COMPETITION BEGINS IN THE WEAVEROOM

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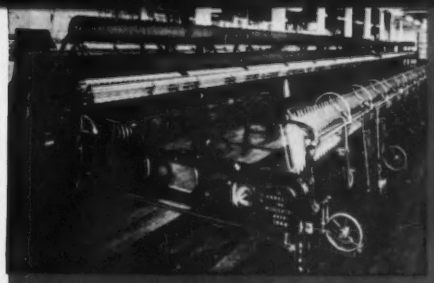
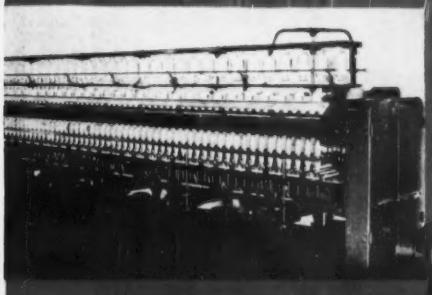
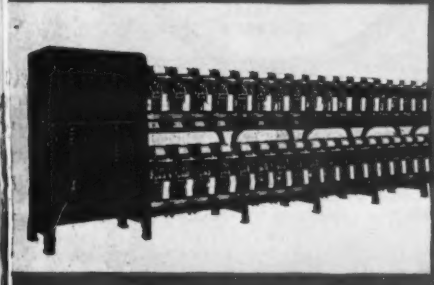


Johnson & Bassett Spinning Mule with Fafnir Ball Bearing equipped Spinning Spindles

Saco-Lowell Spinning Frames with Fafnir Cylinder Units



Whitin F-2 Spinning Frame with Fafnir equipped Tension Pulleys



U. S. Textile Press Drive Double Deck Twister using Fafnir Piye-Seal Ball Bearings

TURNING POINTS

to increased production

in Spinning and Twisting

If you stop to consider the great number of turning points on machines for spinning and twisting, you'll understand how bearings with low co-efficients of friction can make these machines more productive. Comparative tests for example, have shown that a frame equipped with Fafnir ball bearings was ready to doff fully five minutes before the plain bearing frames. In combination with the reduction of lost time for servicing and repairs, this speed-up meant many more productive hours.

In spinning and twisting there are more varieties of Fafnir ball bearings and ball bearing units used than in any other process. They are universally known for their simple, quick installation on all types of machines. Many of these units have the famous Fafnir Wide Inner Ring Ball Bearing with self-locking collar . . . easiest of all to install.

Your most economical way to get increased production may be represented by Fafnir Textile Ball Bearing Units. Why not send for a descriptive catalog? The Fafnir Bearing Company, New Britain, Conn.

A few of the applications incorporating FAFNIR BALL BEARINGS for Spinning and Twisting

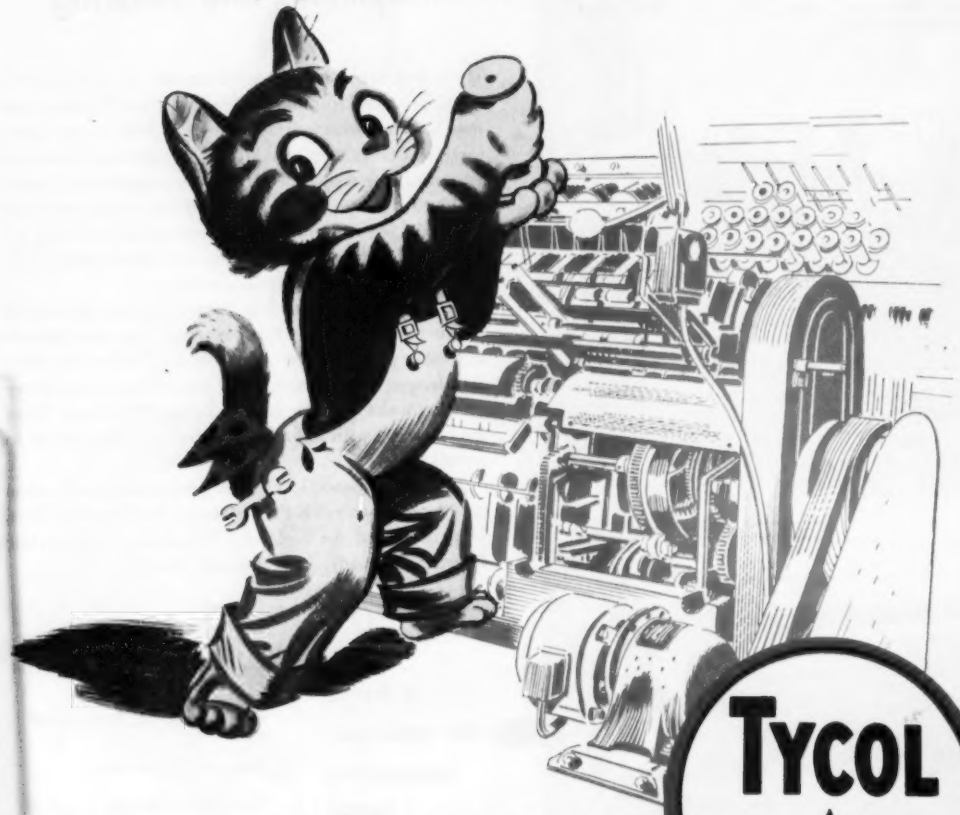
- Back Idlers with Fafnir Piye-Seal Ball Bearings
- Cylinder Bearing Replacement Units
- Upstroke Twister Idlers
- Tape Tension Pulleys
- Spindles (spinning and twisting)
- Cam Shafts
- Jack or Intermediate Gear
- Take-up Rolls
- Cross Shafts

FAFNIR

BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

"Tycol Alweave cuts power consumption... lessens tube loss... lowers equipment down time"



Check! Tycol Alweave Textile Oils reduce thread breakage—hold spindle drag and bolster losses to a minimum. Their high stability and easy scourability let mills operate at top production speeds, with far fewer stoppages.

Specially designed Tycol Alweave Oils are available in a wide range of both mineral and compounded grades. They'll step up efficiency in every mill process.

Learn more about Tycol Alweave Oils. Get in touch with your nearest Tide Water Associated office today.

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When you install Powell Valves according to Powell recommendations, you can be sure that you have the right valves to meet the actual service conditions

There's always a Powell Valve—correct in design and materials—for every flow control service.

Quality fine throughout "The Line"

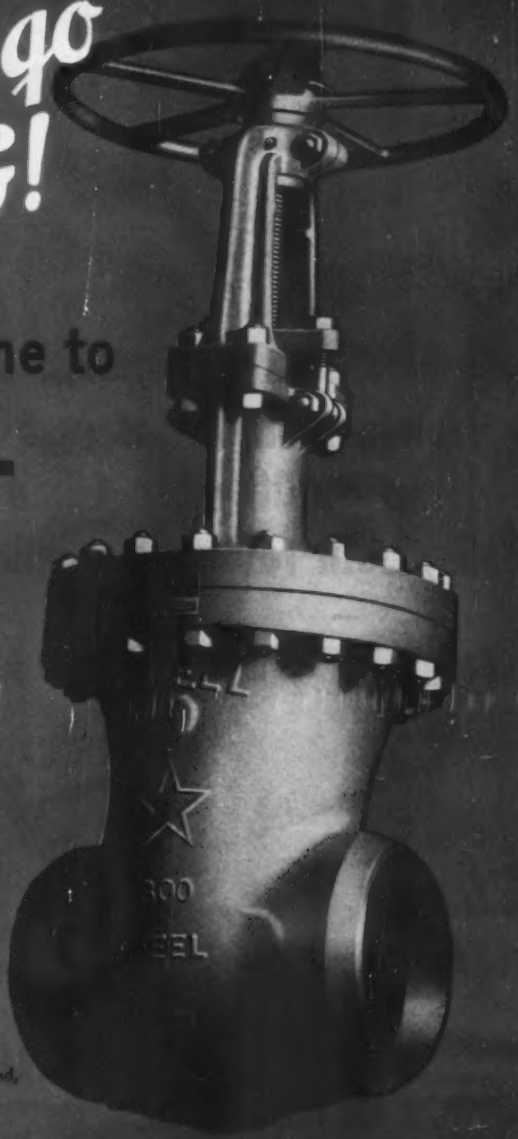

Fig. 3003 W.E.—Class 300-pound, welding end, Cast Steel C. S. & Y. Gate Valve.

POWELL

The WM. POWELL CO., 2525 Spring Grove Ave., P. O. Box 106, Station B, Cincinnati 22, Ohio

Based on this Test

1.40 Hank Roving going into 22's Filling

% IMPROVEMENT OVER REGULAR ROVING AND SPINNING ROLLS

	Improvement in Deviation	Improvement in Break
Regular Roving Rolls with Climax Spinning Rolls	3.08%	6.17%
Climax Roving Rolls with Climax Spinning Rolls	8.72%	8.0 %

a prominent Mill has just ordered 4,000 more Climax Rolls, both roving and spinning

CLIMAX
BALL BEARING TOP ROLLS

FOR ROVING
FOR SPINNING

They pay a quick, handsome profit through

BETTER YARN AT LESS COST

Climax Ball Bearing Top Rolls adopted by

Whitin

MACHINE WORKS

and supplied on Whitin machinery as standard where anti-friction rolls are required. Climax Rolls are available through Whitin Machine Works and all of their agents.

MACHINECRAFT, INC.

21 VERNON STREET, WHITMAN, MASS.

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Brazil:
Eduard Sutig & Cia, Ltd.
Caixa Postal 5904
Sao Paulo, Brazil

Mexico:
Slobotzky, S. A.
Avenida, Uruguay 55
Mexico, D. F.

***Only* CLIMAX**

among anti-friction rolls, permits INTEGRAL RECOVERING and INTEGRAL BUFFING—WITHOUT DISASSEMBLING.

Climax Ball Bearing Top Rolls are made for

- Cotton System Spinning Rolls for all standard and long-draft systems
- Cotton System Roving Rolls
- American System Worsted Rolls
- French and Bradford Worsted Rolls
- Wool Spinning Rolls

Climax Rolls are custom-made to suit your equipment and your weighting requirements.

Here's how you can tell the chain with SHOT-PEENED rollers...

Thousands of tiny steel balls hammer the metal — "cold work" each roller . . . pay off in extra fatigue life . . . added ability to withstand shock and impact.

...the chain that has extra fatigue life

YES, you want to be sure you get shot-peened rollers on the next roller chain you buy. Shot-peening gives rollers the extra fatigue life needed to take repeated shock and impact loads.

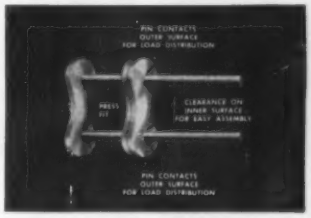
These chains are high in tensile strength, durable under severe loads, relatively light in weight and uniform in pitch. This accounts for their wide acceptance throughout industry for both drive and conveying purposes.

Thanks to constant research and precise manufacturing controls, every Link-Belt Precision Steel Roller Chain meets the highest standards for uniform strength. You get a positive, long-life drive — unaffected by heat, cold or moisture.

Link-Belt Roller Chain is available in single or multiple widths, in 3/8 to 3 in. single and double pitch. For all the facts, call your nearest Link-Belt office.

LINK-BELT

PRECISION STEEL ROLLER CHAIN



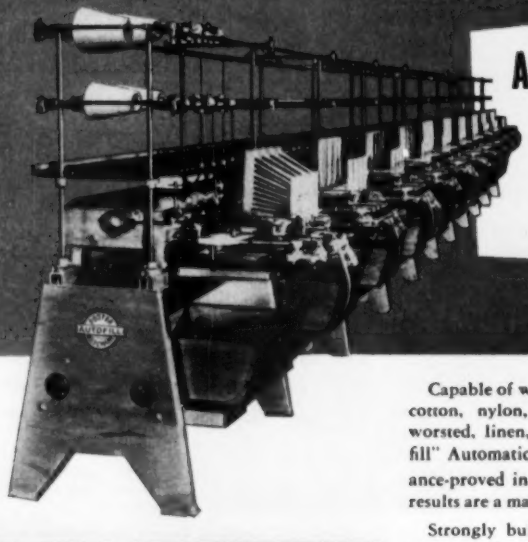
Easier coupling
and uncoupling without sacrificing load distribution

Patented E-Z Assembly feature of Link-Belt Precision Steel Roller Chain has won world-wide approval. Coupling and uncoupling of multiple width chains — right on the job — is far easier. There's absolutely no sacrifice of load distribution . . . no loss of the chain's remarkable performance. Press-fits between chain pins and middle bars have been modified. But full load carrying capacity across the entire width of the chain has been maintained.

LINK-BELT COMPANY: Indianapolis 6, Chicago 9, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa). Offices, Factory Branch Stores and Distributors in principal cities. 12.352

FOR HIGH PRODUCTION AT LOW COST

THE FOSTER-MUSCHAMP "AUTOFILL"



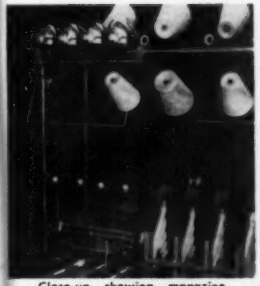
A Fully Automatic Filling Winder Built to Cut Costs

Capable of winding bobbins of all types of yarns, cotton, nylon, silk, rayon, rayon crepe, wool, worsted, linen, etc., the Foster-Muschamp "Autofill" Automatic Filling Winder has been performance-proved in all parts of the world. Production results are a matter of record.

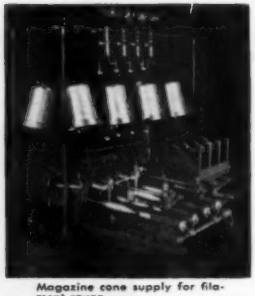
Strongly built units of four spindles each are compact, simple to maintain, with working parts and controls easily accessible. The "Autofill" is completely automatic; requires no skilled labor; and includes among many special features the following:

- Capable of speeds up to 6,000 r.p.m.
- Adjustable for bobbins from 2" to 14" in length.
- Yarn layer locking device prevents sloughing.
- Adjustable automatic bunch builder.
- Mechanical diameter control. No builder wheel in contact with the yarn to cause broken filaments or ridged bobbins.
- Constant spindle speed. Positive drive.
- Maximum production with minimum floor space.

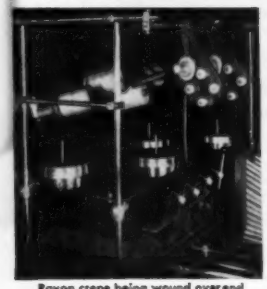
Send today for Bulletin M-1, which gives complete details.



Close-up showing magazine cone supply for cotton.



Magazine cone supply for filament rayon.



Rayon crepe being wound overend from packages at high speed.

Winding filament rayon from parallel packages.

FOSTER MACHINE COMPANY

Westfield, Mass., U.S.A.

Southern Office: Johnston Bldg., Charlotte N. C. • Canadian Representative: Ross Whitehead & Company Limited, University Tower Building, 660 Ste. Catherine Street West, Montreal • European Representative: Muschamp Taylor Limited, Manchester, England

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QUALITY WINDERS FOR ALL TYPES OF YARNS

Stainless requires careful selection, too!

Before you marry your product to stainless steel, make certain that you've chosen the right analysis. *Stainless* is a broad term applied to a whole host of steels, each with its own characteristics. And to get the most out of stainless you must select with care.

That's why Crucible, a pioneer in the development of this specialty, offers you the services of a staff of metallurgists, well qualified by experience with hundreds of applications, to help you put stainless to work properly.

For more than half a century, Crucible has been the leader in the specialty steel field. There is no substitute for Crucible background — take full advantage of it. When you think of stainless — call in Crucible. CRUCIBLE STEEL COMPANY OF AMERICA, Chrysler Building, New York 17, N. Y.

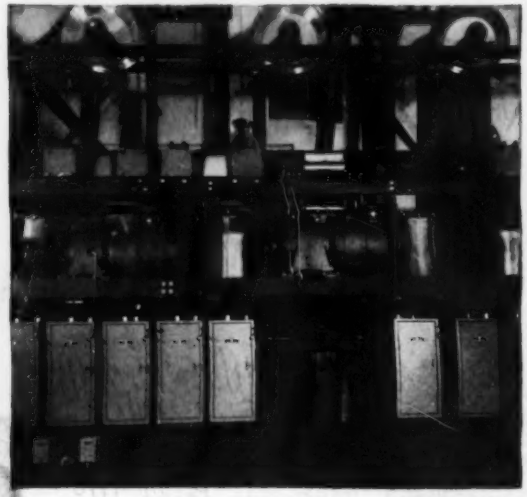
CRUCIBLE first name in special purpose steels

51 *years of* Fine *steelmaking*

STAINLESS STEELS

STAINLESS • HIGH SPEED • TOOL • ALLOY • MACHINERY • SPECIAL PURPOSE STEELS

NEW BLEACHING UNIT FEATURES G-E ADJUSTABLE-SPEED DRIVE



General Electric ACA gear-motors provide efficient, economical low-speed driving power for this "junior" bleaching range, with speed adjustment over a 3:1 range. G-E combination magnetic starters are mounted below.

Individual Sections Driven by ACA Gear-motors for Flexibility, Continuity

Here's good news for textile plants who have been looking for an inexpensive means of switching from batch to continuous bleaching, but whose requirements don't justify the big equipment investment in a large type of bleaching range. A complete, smaller bleaching range (called a "Junior Bleaching Unit"), with General Electric adjustable-speed ACA gear-motor drive for each section, has been developed by the H. W. Butterworth & Sons Company in Philadelphia. This new unit provides efficient, flexible operation for those plants who bleach relatively small amounts of various types of fabrics.

The ACA gear-motor with 3:1 speed range and simple, inexpensive push-button control provides an efficient, economical solution to driving this versatile new unit. Motor speeds can be quickly and easily adjusted to handle various types and weights of cloth. Each section in the range has ample cloth storage space so that no automatic speed co-ordination is required of the motors.

Your supplier can probably give you the complete story on the new Butterworth Range. For more details on how adjustable-speed drives help increase output and reduce costs, just mail the coupon below.

WHICH DRIVES ARE BEST FOR YOU?

This 26-page manual will help you decide. It shows you how to go about selecting the *right* drive. The handy drive chart included is worth your detailed study. Bulletin GEA-5334. Check here . . . . . ☐

General Electric Company, Section 646-12
Schenectady 5, N. Y.

Please send me the bulletins checked:

☐ for reference only
☐ for planning an immediate project

NAME _____

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THE ACA MOTOR—*Speed ranges to 20:1*—An adjustable-speed a-c motor. Speed range 3:1 or 4:1 continuous; for intermittent operation from 6:1 to 20:1. Bulletin GEA-4883. Check here . . . . . ☐

THE SPEED VARIATOR—*Speed ranges to 40:1*—An adjustable-voltage d-c drive that uses a-c power. Speed ranges 8:1 to 40:1 and beyond. Bulletin GEA-5335. Check here. . . . . ☐

THY-MO-TROL*—*Speed ranges to 100:1*—The most accurate, most versatile, and fastest acting of all G-E adjustable-speed drives. Speed ranges of 100:1 or better. Bulletin GEA-5337. Check here. . . . . ☐

ELECTRONIC SPEED VARIATOR—An electronically controlled version of the Speed Variator that offers most of the features of Thy-mo-trol for applications in the 15 to 60-hp range at moderate cost. Bulletin GEA-5336. Check here . . . . . ☐

** Thy-mo-trol is the General Electric Company's registered trademark for its electronic motor-control system.*

Headquarters for ELECTRICAL ADJUSTABLE-SPEED DRIVES

GENERAL ELECTRIC

A New Star Is Born
From the research laboratories of The Hilton-Davis Chemical Company comes a versatile new series of brilliant colors of particular interest to printers and dyers of cotton and rayon materials --- SPECTROLENES. After an extensive series of tests and actual mill runs, these colors are being acclaimed in the textile industry for their diversity and practicability. For a complete description of SPECTROLENES, please turn to the following page.
SPECTROLENES
THE HILTON-DAVIS CHEMICAL CO. DIV.
2235 LANGDON FARM ROAD
CINCINNATI 13, OHIO

What are

SPECTROLENES ?

SPECTROLENES are Hiltonil Fast Color Bases which have been completely diazotized and then stabilized in such a manner as to prohibit coupling with naphthols in solution or naphtholated material until the stabilizer is broken down. The base is released from the stabilizer by the action of acid or acidified steam, such as an acid ager, allowing complete coupling of the naphthol with the fast color base.

Spectrolenes have been thoroughly plant tested and acclaimed for the following features:

Spectrolenes are Versatile: — The number and range of shades possible with any Spectrolene is limited only by the number of naphthols available. Combinations of naphthols greatly increase the range of possible shades.

Spectrolenes are Stable:—Spectrolenes have excellent stability by themselves or when combined with naphthols. As Spectrolenes are mixed with naphthols in the plant where applied, the loss of color value due to prolonged storage is minimized. The freshness of the combination gives added brilliance and color value.

Spectrolenes are Practical:—Spectrolenes are in solution form for ease of handling and are standardized to the best strength for practical plant usage. For the printer, Spectrolenes make available many shades having varying costs and fastness properties, most of which have not been previously available.

Spectrolenes Have Many Possibilities:—Inasmuch as Spectrolenes are a comparatively new development, there are many forms of application which have not yet been fully explored. Wherever naphthols and fast color bases or salts are used, there is a possibility that Spectrolenes may be of value.

Spectrolenes Presently Available:—Spectrolene Red KB, Spectrolene Red RC, Spectrolene Scarlet 2G, Spectrolene Orange HD, Spectrolene Blue B. Other Spectrolenes are in process of development.

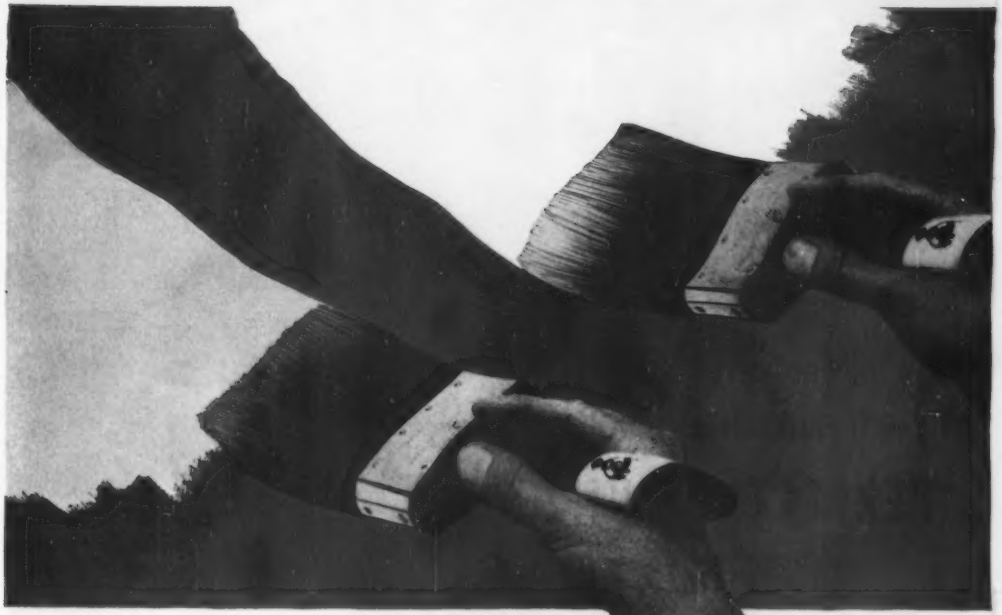
For complete technical information or a demonstration of the uses of Spectrolenes, contact:

The Blackman-Uhler Company, Inc.—Spartanburg, South Carolina
The Claflin-Dorman Company—Boston, Massachusetts
The Canadye Corporation—Hamilton, Ontario

representing

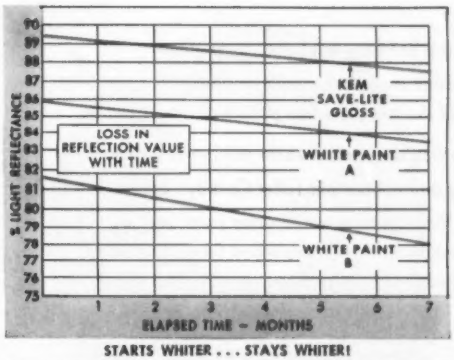
THE HILTON-DAVIS CHEMICAL CO. DIV.
Manufacturers of Dyestuffs for the Textile Industry
CINCINNATI 13, OHIO

Litho in U. S. A.



MAKE THIS TEST

before you paint your plant!



STARTS WHITER . . . STAYS WHITER!

Note how the whiteness, or reflective value, of Save-Lite *starts* higher than conventional finishes when first applied, and *continues* higher, as time goes on. This means *longer* intervals before repainting is required.

Compare KEM SAVE-LITE with ordinary whites

SEE why it stays cleaner—longer!

See for yourself the difference there can be in the whiteness of "white" finishes . . . even when they are first applied! Make a side-by-side comparison of KEM SAVE-LITE Mill White against conventional white finishes on any wall surface in your plant.

You can see the difference, from the start, in gleaming, brilliant whiteness . . . a difference because of the *controlled*, light-reflective properties that are designed into SAVE-LITE Mill White Finishes.

KEM SAVE-LITE *starts* whiter . . . KEM SAVE-LITE *stays* whiter, as the actual light reflectometer measurements in the comparative chart show. You'll find these same properties, too, enable it to hide better and cover farther! Call your Sherwin-Williams representative today for a demonstration, or write The Sherwin-Williams Co., Cleveland 1, O. (Division Offices, Charlotte, N. C. and Boston, Mass.)

SHERWIN-WILLIAMS

INDUSTRIAL MAINTENANCE FINISHES

SAVE-LITE MILL WHITE • COLOR HARMONY FINISHES

MILL VILLAGE PAINTS

By the Foot or by the Mile....
You'll Find TUFFER Card Clothing
PERFECTLY UNIFORM

Uniformity in Card Clothing is not easy to obtain . . . because in its manufacture, each machine must do the work of cutting millions of pieces of wire and shaping them into perfectly uniform staples.

Here you see our inspection department where millions of points are examined every working day to maintain Tuffer Quality. Such vigilance brings Tuffer Card Clothing to you with every point in position with uniformity of height, pitch and angle and finished perfectly for immediate use on your cards.

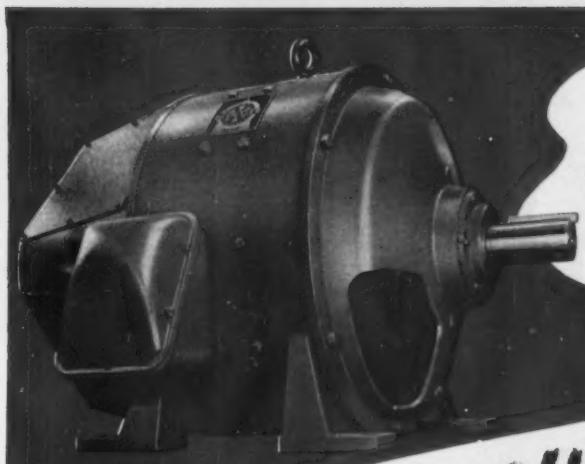
HOWARD BROS. MFG. CO. WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.

Branches: Philadelphia, Pa. and Blanco, Texas *Direct Representation in Canada* A-6

TUFFER CARD CLOTHING IMPROVES PRODUCTION ALL ALONG THE LINE

For more information, write direct or use Reader Service post card.



RELIANCE
TYPE 'T' HEAVY DUTY D-C. MOTORS

THE TOUGHEST MOTORS EVER BUILT...

because Type 'T' users have played an important part in the designing and the constant improvement of these motors to meet all of the rugged service conditions encountered today in plants, mills and mines.

Heavy duty, double-taped coils, for example, are impregnated with a wear-resistant polymerizing varnish which assures unsurpassed mechanical protection. For other important construction features, mechanical designs, dimensions and selection data, write for Bulletin C-2001.

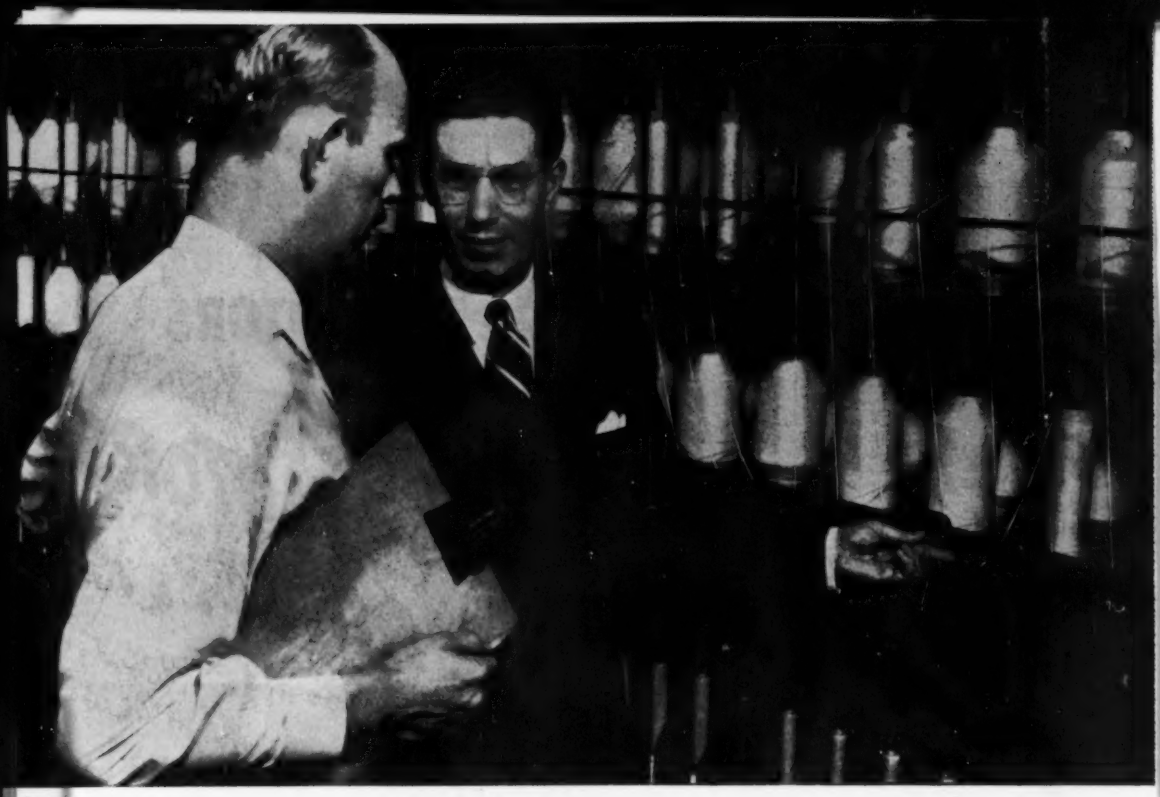
Constant and adjustable-speed Type 'T' Heavy Duty D-c. Motors are available from ¾ through 1000 horsepower.

Type 'T' Heavy Duty D-c. Motor Frame with 6-pole field windings

Sales Representatives in Principal Cities

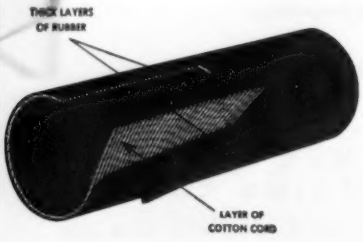
RELIANCE ELECTRIC AND ENGINEERING CO.

"Motor-Drive Is More Than Power" • 1086 Ivanhoe Road, Cleveland 10, Ohio



YEARS OF CLEAN RUNNING

from this Armstrong Apron



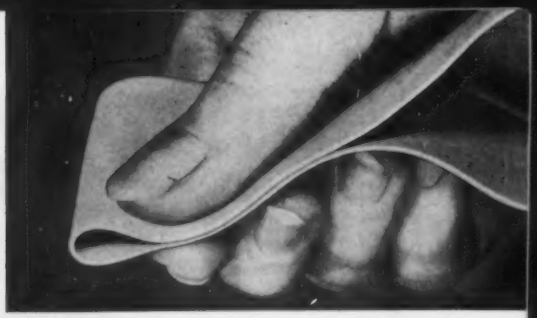
Here's an apron that under normal conditions will run for years without failure. For example, one well-known Georgia mill ran NO-700 Accotex® Aprons on their Casablanca frames continuously for eight years. At the end of that time, they were still free of cracks and running clean.

Extra resistance to dirt, oil, and solvents is the result of special qualities built into the outer layer of every Armstrong's Accotex Apron. This seamless outer layer is made of specially compounded synthetic rubber with a scuff-resistant surface that will not absorb oil. Thus Accotex Aprons do not tend to pick up waste. They are specially formulated and treated to remain satiny smooth.

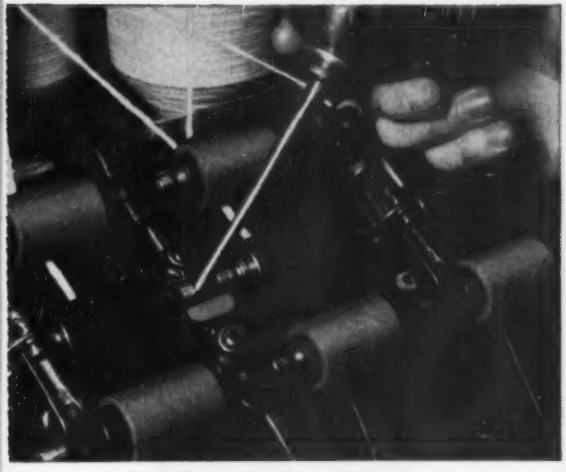
The outside layer doesn't do all the job . . . there are two more, each with a special function. The inner layer, also of seamless synthetic rubber, is compounded to resist abrasion. The middle layer is a sturdy cord interliner which prevents stretching or curled edges. Each part contributed to the long life of Accotex Aprons. Vulcanized together, they result in a clean-running, trouble-free apron.

Accotex Aprons are made to fit all long-draft equipment. Call Your Armstrong representative for samples or write to Armstrong Cork Company, Textile Products Department, 8306 Arch Street, Lancaster, Penna. Available for export.

NO SEAMS. Look at an Armstrong's Accotex Apron inside and out. A glance shows you it has no seams to crack or break or cause irregularities in the yarn.



SUPER-FLEXIBLE. Armstrong's NO-750 Accotex Aprons have the extra flexibility and wear resistance needed on single apron frames. They run smoothly over the nose bar, always give smooth slip-roll action.

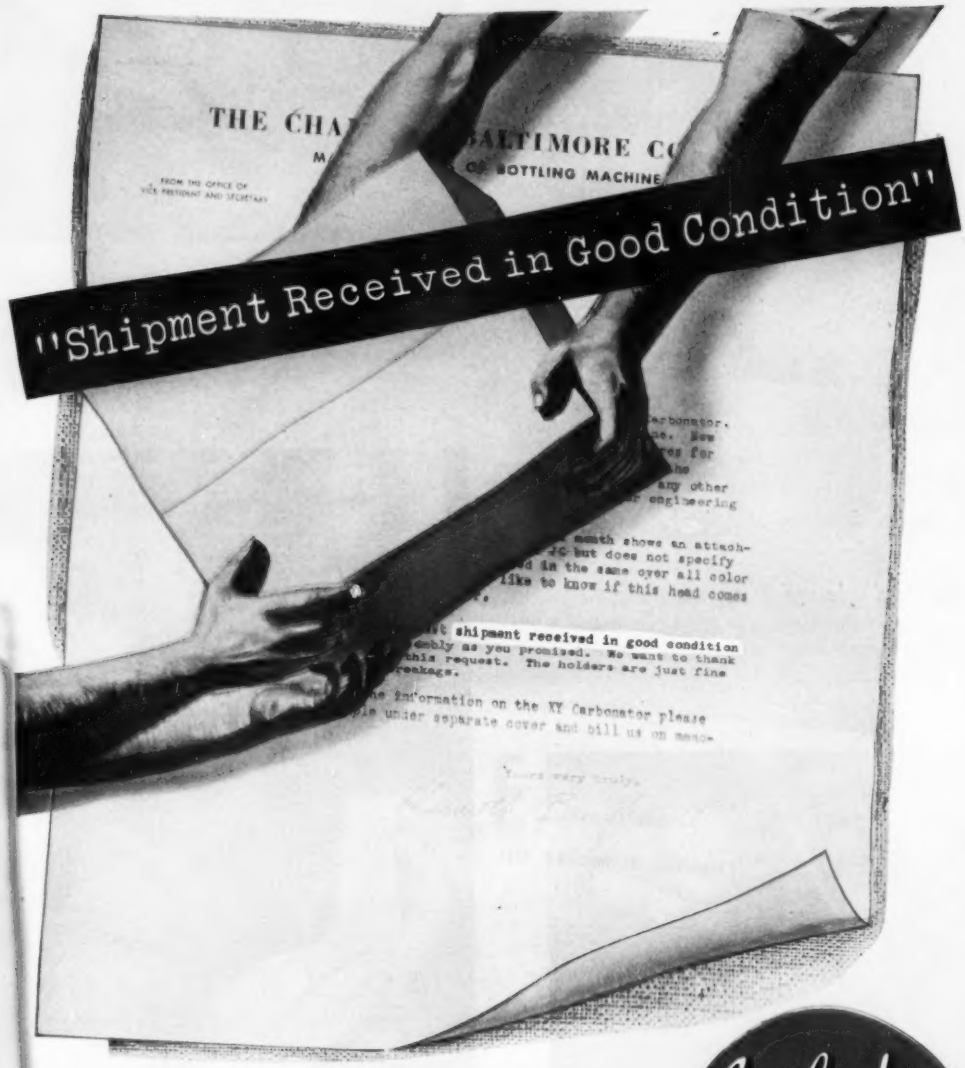


OIL RESISTANT. Oils, dyes, and commonly used textile solvents have no effect on Armstrong's Accotex Aprons. They operate efficiently at any mill temperature and will not sweat under any conditions.

SATIN SMOOTH. Rub your fingers across the surface of an Armstrong's Apron. Smooth, isn't it? And it will stay just as smooth for the life of the apron, assuring you of years of continuous clean running.

ARMSTRONG'S ACCOTEX APRONS

One of Armstrong's complete line of textile mill supplies



That's the pay-off line in this letter — the good relations builder! *"Shipment received in good condition."*

When your product is packaged in Gaylord boxes — you know your product is better *protected* — All the Way!

For years Gaylord boxes have been protecting the products of many of the country's leading manufacturers.

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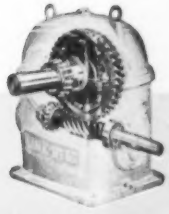
No one speed reducer solves every reduction problem

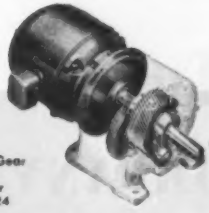
That's why LINK-BELT builds all 3

WHETHER it's a helical, a herringbone or worm gear drive that best fits your needs—you get an unbiased recommendation, an incomparable product from your Link-Belt power transmission engineer.

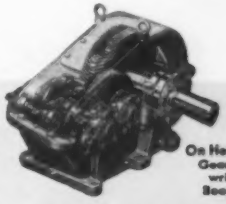
That's why Link-Belt builds all three; has no axe to grind. You can be sure you get the one that suits all your requirements for ratio, space, shaft position, shock loading and many other factors. Precision-engineered for quiet, economical power transmission, all Link-Belt drives will give you long service under the toughest operating conditions.



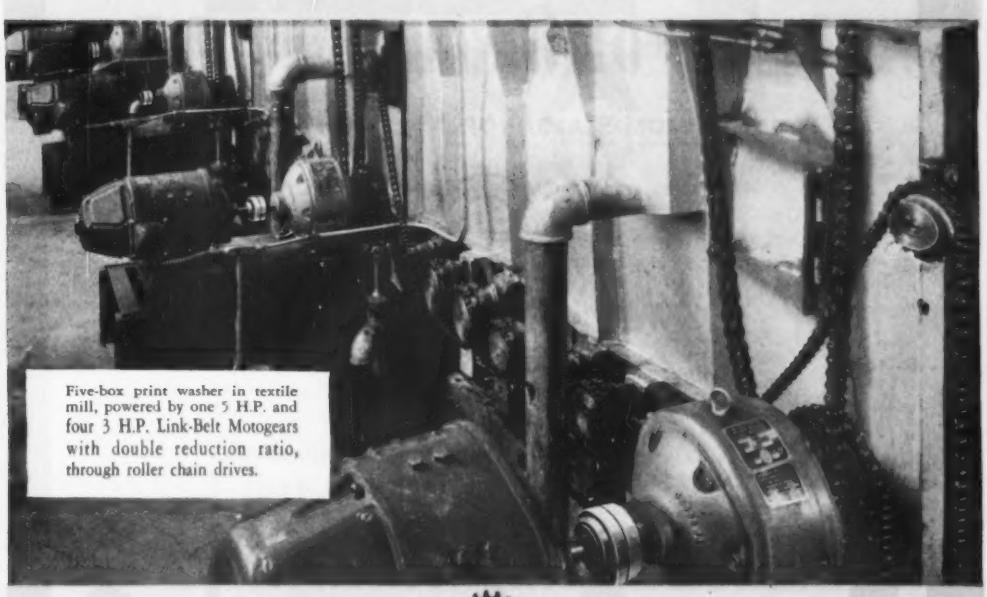
On Worm Gear Drives write for Book 2324



On Gearmotor and Helical Gear Drives write for Book 2247



On Herringbone Gear Drives write for Book 2419



Five-box print washer in textile mill, powered by one 5 H.P. and four 3 H.P. Link-Belt Motogears with double reduction ratio, through roller chain drives.

LINK-BELT
ENCLOSED GEAR DRIVES

LINK-BELT COMPANY: Chicago 9, Indianapolis 6, Philadelphia 40, Atlanta, Houston 1, Minneapolis 5, San Francisco 24, Los Angeles 33, Seattle 4, Toronto 8, Springs (South Africa). Offices, Factory Branch Stores and Distributors in principal cities.

Complete
FACTORING
SERVICE

FACTORING DIVISION

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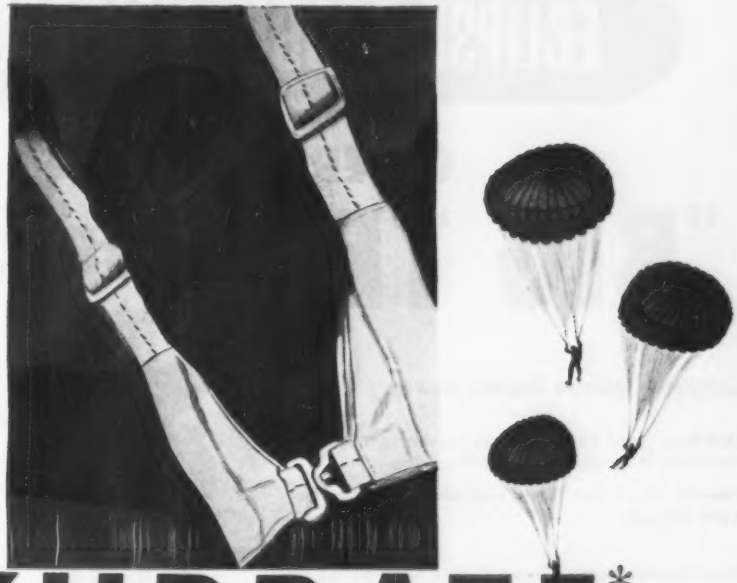
ATLANTA

Next door to every
MILL in the SOUTH

Member: Federal Deposit Insurance Corporation

for positive **mildew-proofing . . .**



KUPRATE*

WARWICK'S COPPER-8-QUINOLINOLATE (SOLUBILIZED)

For all types of webbing . . . parachute harness, cartridge belts, safety belts, etc. . . . KUPRATE OS 10 WR, *with water repellency included,* is unexcelled. Finishers favor this new Warwick formula because it comes as a viscuous liquid—so much easier to handle.

Full details, plus samples and technical counsel are yours for the asking.

Other Warwick mildew-proofing agents:

- **KUPRATE OS 10 WR SPECIAL** . . . for tenting, duck, etc., where specifications require good spray rating and hydrostatic test.
- **KUPRATE OSC-10** . . . for rope and cordage primarily. Low in volatile constituents, it provides a product practically free from fire hazard.
- **KUPRATE OS 10** . . . for thread and for piece goods generally where water repellency is unnecessary or undesirable.

WARWICK CHEMICAL COMPANY, DIVISION CHEMICAL CORPORATION

10TH STREET AND 44TH AVENUE, LONG ISLAND CITY, NEW YORK

®REG. U. S. PAT. OFF.

CHEMICAL SPECIALTIES FOR THE TEXTILE INDUSTRY Antilustrole® dullers • Appramine® cationic softeners • Appretole® anionic softeners Eumercin® mercerizing assistants • Formaset® textile resins • Lanole® tar and grease removers • Organosol coatings for textiles and paper • Plastisol for coating and molding Setole® textile resins • Sulfanole® synthetic detergents • Suntone® pigment printing colors for textiles and plastics • Warcofix® color fixatives • Warco® GFI gas fading inhibitor • Warcolene® finishing oils • Warconyl® fire retardants • Warcosan® wetting and rewetting agents • Warcosol® penetrants • Weave-Lok® non-slip finish.

only

ECLIPSE BOBBIN HOLDERS

OFFER THESE

"BIG TEN" Features

1. Completely replaces wooden skewers.
2. Stainless steel ball bearings minimize friction, resulting in uniform quality of roving.
3. Permits less twist. Tests indicate yarn of more even texture.
4. Creel boards easily cleaned. Overhead suspension leaves open creels. Blowers more effective.
5. Better spinning of spun rayon.
6. Easier creeling; less physical effort and fewer motions required.
7. Improved brake attachment prevents over-run and backlash.
8. Now cadmium plated and stainless steel balls more rust resistant.
9. Time-tested product—holders in operation for over ten years.
10. Easy to install; practically no upkeep.

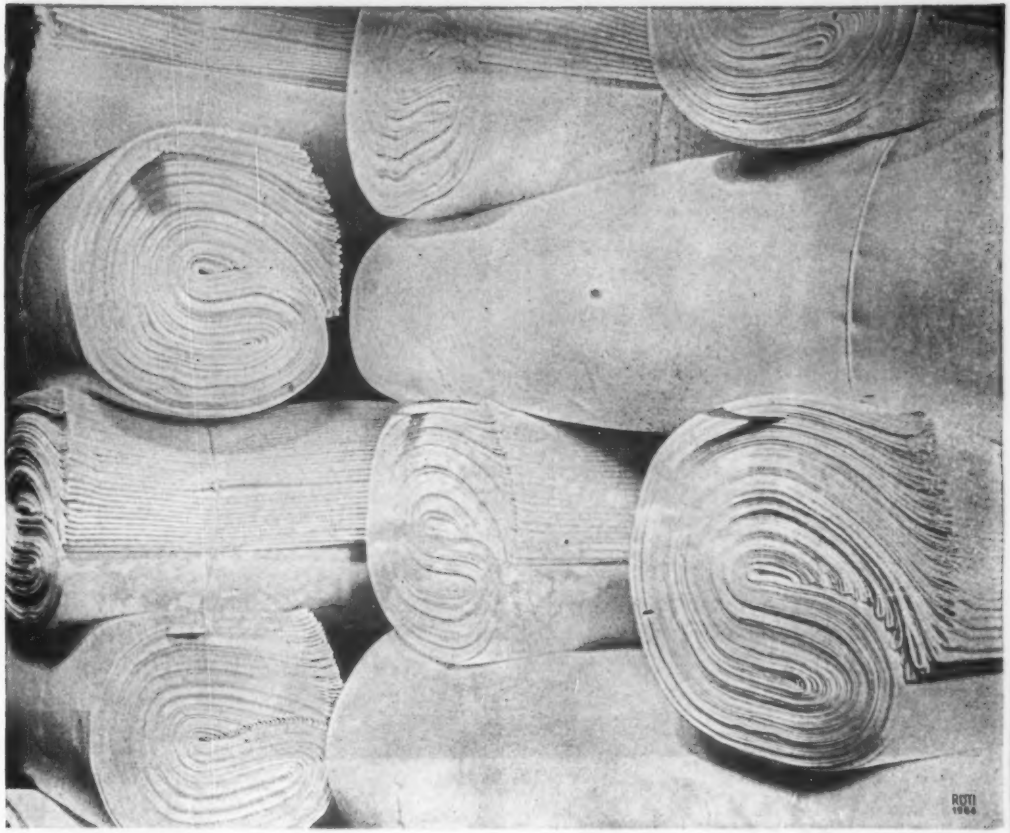
★ ★ ★

Textile men everywhere are concerned with efficiency and economy of operation, and that's just what these *exclusive* Eclipse features assure you! If you want to modernize your present plant equipment profitably, you can't go wrong with the finest—Eclipse Bobbin Holders. Write us for further details.

ECLIPSE MACHINE DIVISION of
ELMIRA, NEW YORK
Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

Bendix AVIATION CORPORATION

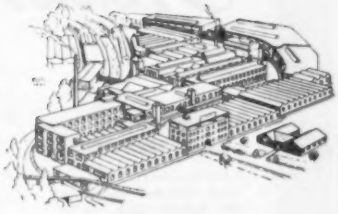
ECLIPSE



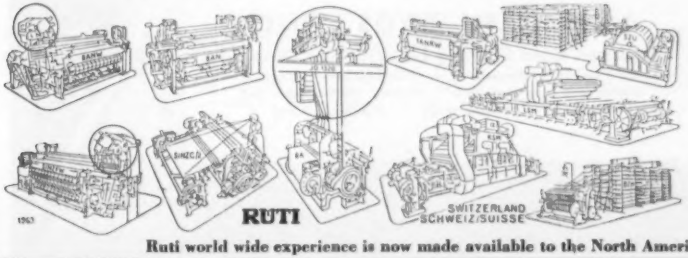
Get high speed Ruti machinery to contribute to your production efficiency

Ruti is the oldest, biggest and leading firm on the European Continent specializing in the manufacture of *modern weaving looms and machines for silk, rayon, cotton, wool, flax and jute, in one word for all textile fibres.*

Their woollen looms and their one-shuttle and multi-shuttle automatic looms for cotton, etc., are to be found in practically every progressive weaving mill in Europe, Australia, Africa and South America, where they produce the best cloth under economical conditions.



Ruti Machinery Works Ltd.
founded by Caspar Honegger in 1842
RUTI (Zurich) SWITZERLAND



When you buy RUTI you buy results and lasting quality

RUTI

One of the great names in textile progress

Ruti world wide experience is now made available to the North American textile industry.

Ashworth CARD CLOTHING

4 factories . . . 6 repair shops . . . 7 distributing points . . . here's an unbeatable line-up for quality and service. It means dependability, promptness and convenience in your supply of card clothing and associated products.

Wherever your are, you'll find Ashworth distributing points close at hand to make readily available consistently high quality products — the result of 90 years experience in cards and card clothing by one family.

To get the most from your cards . . . to get the most for your money . . . ask today about the free Ashworth Surveys.

PRODUCTS AND SERVICES

Card Clothing for Cotton, Wool, Worsted, Silk, Rayon and Asbestos Cards and for All Types of Napping Machinery. Brusher Clothing and Card Clothing for Special Purposes. Lickerin Wire and Garnet Wire. Sole Distributors for Platt's Metallic Wire, Lickerins and Top Flats Reclothed.

ASHWORTH BROS., INC.

American Card Clothing Co. (Woolen Division)

Fall River *†‡ Worcester *‡ Philadelphia*†‡ Atlanta‡
Greenville*†‡ Charlotte†‡ Dallas†‡ (Textile Supply Co.)

* Factory † Repair Shop ‡ Distributing Point

engineered to meet defense production needs

for higher lighting levels at lower maintenance and operation costs

One of today's most important defense production lighting problems is not only *how to get* HIGH LIGHTING LEVELS economically, but also, *how to sustain them* economically, year after year. Benjamin's answer is "MAGNA-FLO". This new lighting system, by utilizing the new, high light-output efficiency T12 Slimline Lamps, provides higher light output more efficiently, more ECONOMICALLY, than any other Benjamin-built fluorescent unit.

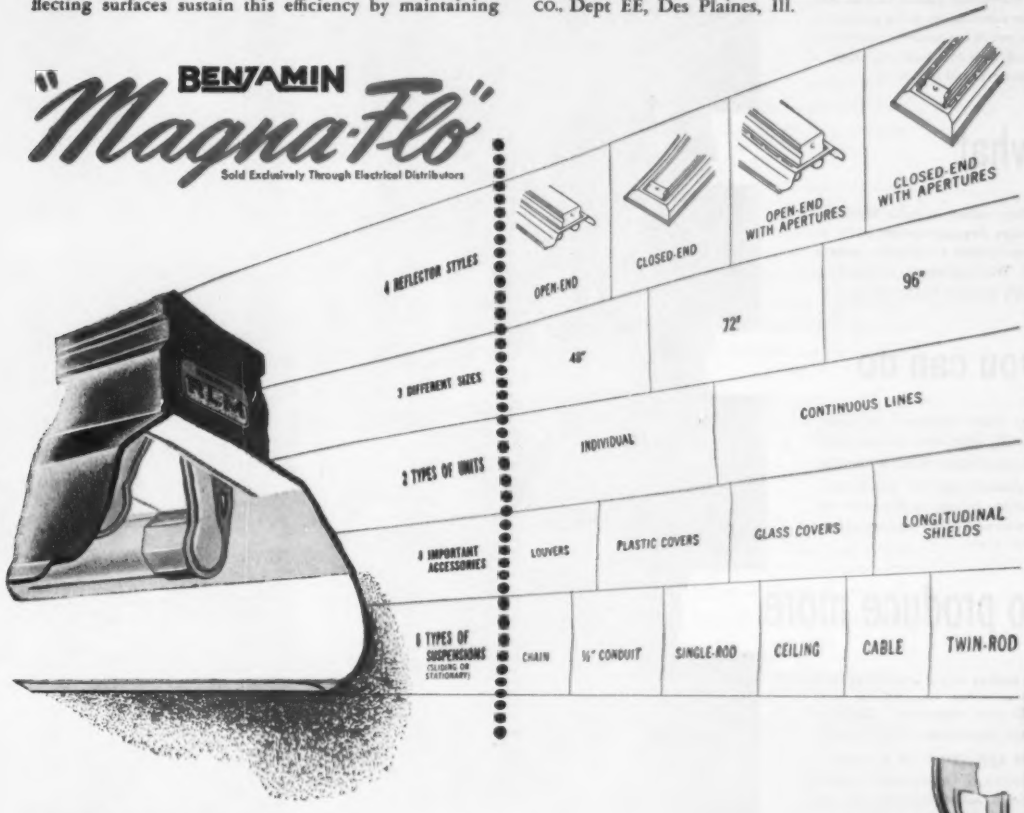
Furthermore, with "Magna-Flo" you are assured that this high light-output efficiency of the T12 lamp is SUSTAINED ECONOMICALLY, year after year. Porcelain Enameled reflecting surfaces sustain this efficiency by maintaining original high reflectivity with occasional soap-and-water cleaning. "Springlox" Lampholders sustain efficiency by facilitating maintenance of the reflector and the lamps themselves. Benjamin "Battleship" construction, utilizing extra-heavy gauge reflector steel, sustains efficiency by preventing sag, distortion and breakage.

FREE "MAGNA-FLO" BULLETIN brings you complete data about this most modern, efficient way to get HIGHER LIGHTING LEVELS at lower cost . . . write for your free copy TODAY! BENJAMIN ELECTRIC MFG. CO., Dept EE, Des Plaines, Ill.

BENJAMIN

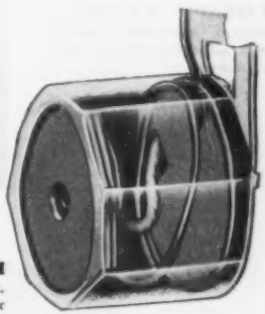
"Magna-Flo"

Sold Exclusively Through Electrical Distributors



engineered TO CAPITALIZE TO THE FULLEST

ON THE NEW, HIGHER-EFFICIENCY, INSTANT-START T12 SLIMLINE LAMPS! "Magna-Flo" Units are available in a wide range of systems for nearly all industrial seeing requirements! Open or closed-end diffuser-type reflectors are available. Apertures in these reflectors direct 5% of light upward for greater seeing comfort.



engineered TO REDUCE MAINTENANCE

AND OPERATING COSTS! *Exclusive "SPRINGLOX" Lampholders,* by simplifying re-lamping, facilitate reflector cleaning and maintenance. They make possible fast, one-hand lamp insertion, and assurance against lamps working loose or dropping out.

They did

This North Carolina mill saw the advantages to be gained in terms of increased production and reduced costs through a modernized drive.

what

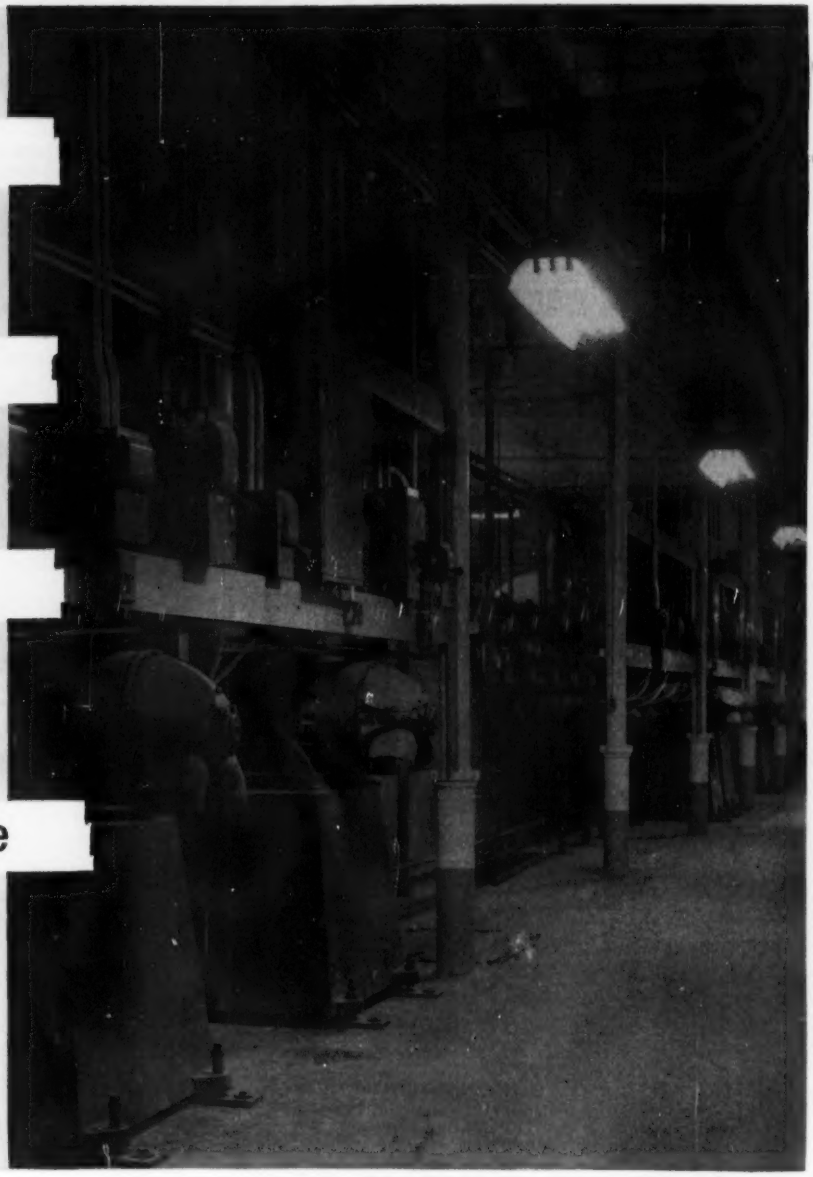
They called in their Westinghouse representative early in their plans to get the benefit of Westinghouse experience with similar installations.

you can do

Do what hundreds of other textile firms are doing. Have Westinghouse work with your engineers and the machinery builder in the application of drives and other equipment to your plant.

to produce more

Whether it's a new drive like this, more dependable and efficient electrical distribution, better servicing or simply the application of a piece of electrical equipment to a tough job, Westinghouse has the answer.



Choose *matched drives* for your finishing machines

That *extra* productive capacity that you want from your finishing machines often depends on "matching" the electrical drive to the textile process and productive requirements of each machine.

Extra production, for instance, can be obtained by running the range at the highest speed that the process and machine will permit. Westinghouse has designed drives that are operating ranges at 375 ypm.

High quality frequently depends on precise speed and tension control. *Low maintenance* is a result of well designed apparatus and the simplest system practical. *Reduced man-power requirements,* particularly important today, depend on the degree of automatic control. This also reduces the human judgment element and helps raise quality. *Versatility,* which permits operating individual sections of a range independently if desired, can be worked into the control system. All of these factors are functions of the drive.

That's why it's important to get a drive that is "matched" to your requirements. This can take the form of a "packaged drive" or of separate components mounted as desired. That's why Westinghouse recommends a thorough study of all factors before a drive is selected.

Your Westinghouse representative will be glad to help with your drive requirements . . . and he is backed by engineers and textile specialists with years of experience in the application of these drives to textile mills. They'll be glad to work with you and your finishing machinery builder on new drive requirements.

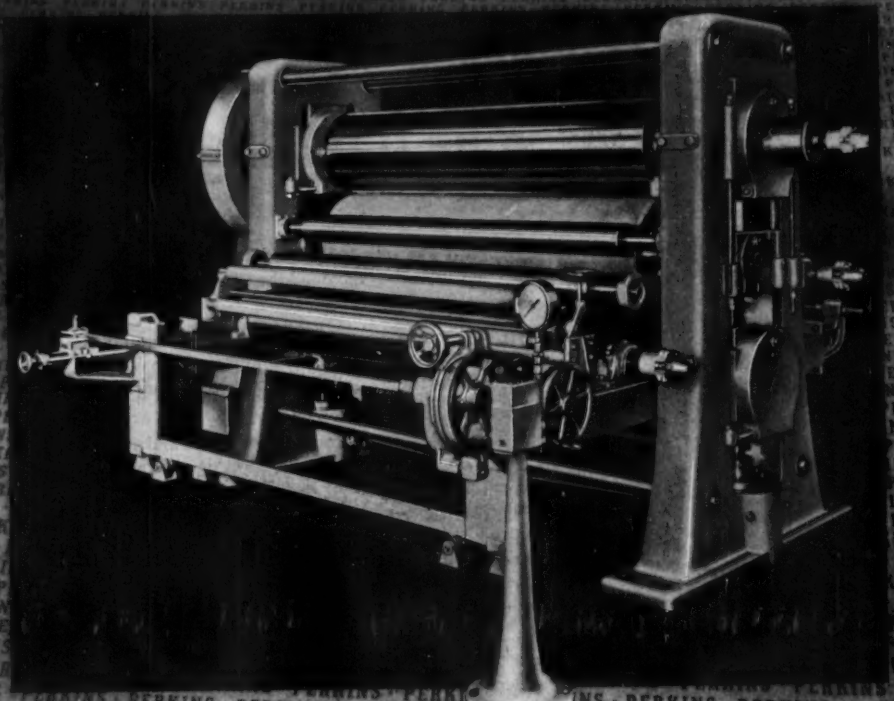
NEW FREE BOOK

Here's help, too—this 32-page book gives you factual information about Westinghouse finishing drives. Tells about tension control, cost factors, speed range, operating economies, maintenance features and other vital points. Write for Booklet B-4034, "Westinghouse Equipment for Textile Finishing". Westinghouse Electric Corporation, Box 868, Pittsburgh 30, Pennsylvania. J-94843

YOU CAN BE **SURE**.. IF IT'S

Westinghouse

EQUIPMENT FOR TEXTILE PRODUCTION



PERKINS POINTS WITH PRIDE

to this new three-roll 83" face 60-ton Hydraulic Rolling Calender. Top and bottom rolls, chilled iron. Intermediate roll, cotton. This calender is equipped with variable speed drive, pre-heating drum, cooling drum, three-bar tension group and a let-off which is adjustable laterally and horizontally.

B. F. PERKINS & SON, Inc.

HOLYOKE, MASS., U.S.A.

LARGEST MANUFACTURERS OF CALENDER ROLLS IN THE WORLD

"Successful merchandising demands quality knitting."

says MISS MARY CAHILL, Hosiery Buyer, Emery Bird Thayer, Kansas City

"Anticipating the customers' desires in hosiery requires not only a complete knowledge of styling and color trends, but the realization that good knitting insures quality in hosiery. Changes in styling and color encourage the purchase of more stockings, but good quality, assuring long wear, is the factor that makes the customer a permanent one. The good will of the community and the merchandising figures of your department depend on the permanent customer."

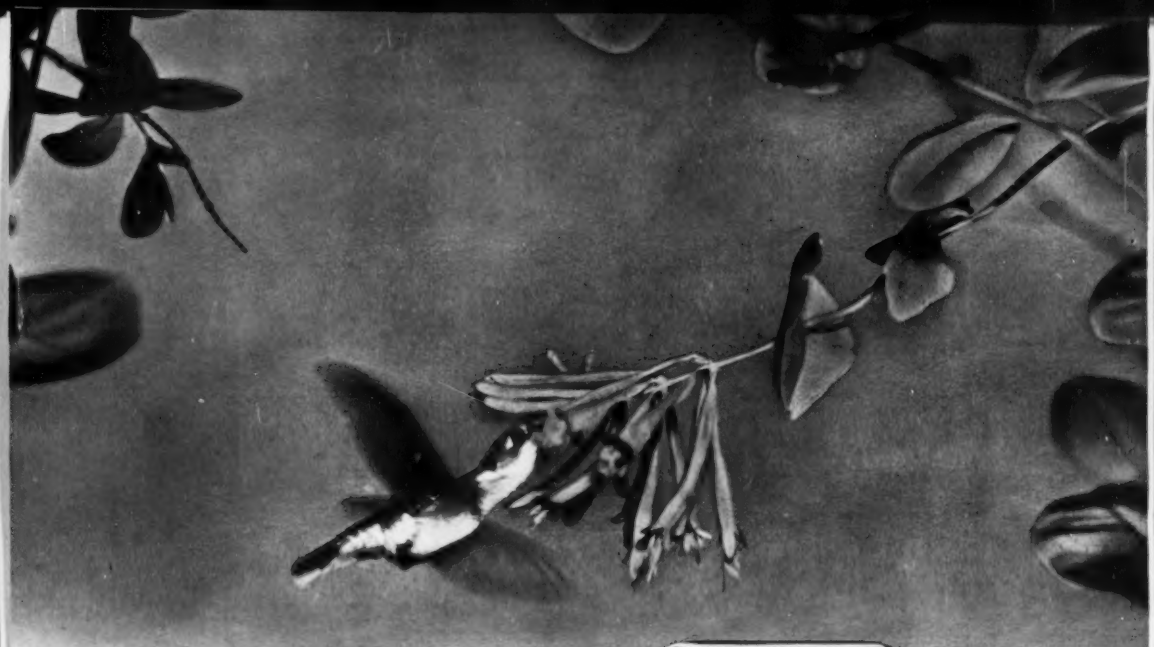
You can help to insure the good quality of your merchandise by always specifying

TORRINGTON

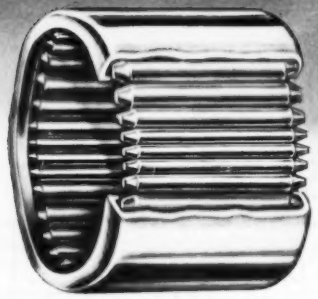
SPRING BEARD NEEDLES · SINKERS · DIVIDERS · SPLIT DIVIDERS

THE TORRINGTON COMPANY, Torrington, Conn., U. S. A.
Established 1866

Branches: New York • Philadelphia • Chicago • Greensboro, N. C. • Boston • St. Louis
Toronto, Can. • *Pacific Coast Representative:* E. G. Paules, 1762 West Vernon Ave., Los Angeles 37, Calif. Broadgate House, 7-10 Eldon St., London E. C. 2, England



compact...



Torrington Needle Bearings fit in tight places. These efficient units have the smallest O.D. in relation to radial load capacity of any anti-friction bearings.

This combination of compact size and high capacity has proved an important design advantage from the standpoint of space-savings and weight reduction. Products utilizing Needle Bearings are models of simplicity and efficiency.

If your application requires compactness coupled with high capacity, get acquainted with Torrington Needle Bearings. We'll be glad to help you adapt them to your specific needs.

THE TORRINGTON COMPANY

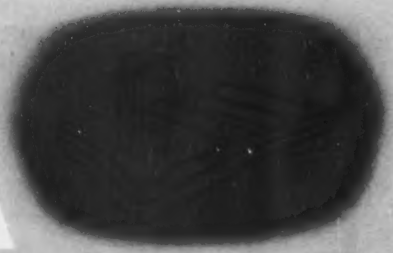
Torrington, Conn. • South Bend 21, Ind.

District Offices and Distributors in Principal Cities of United States and Canada

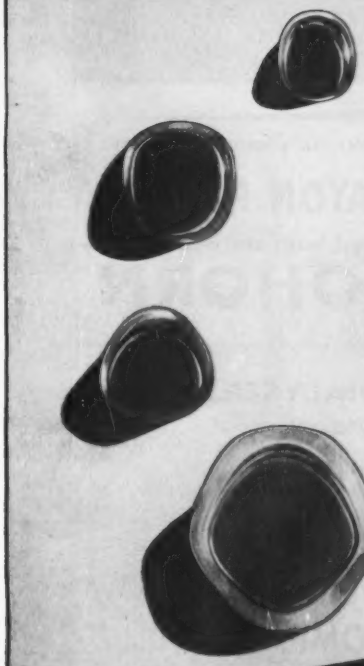
TORRINGTON *NEEDLE* BEARINGS

NEEDLE • SPHERICAL ROLLER • TAPERED ROLLER • STRAIGHT ROLLER • BALL • NEEDLE ROLLERS

In the World's most modern
RAYON PLANTS
designed, built and operated by
KOHORN



In the UNITED STATES • BRAZIL • PERU • CHILE • EGYPT



Baker & Co., Inc.
113 ASTOR STREET
NEWARK 5, NEW JERSEY

BAKER
SPINNERETTES
ARE USED

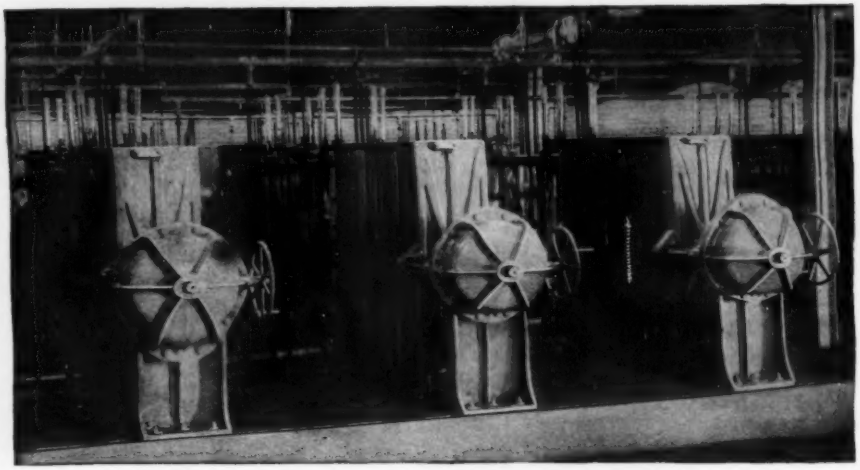
We have been producing spinnerettes for synthetic fibres since the early days of the rayon industry and our research and experiments have had much to do with making them the highly developed precision instruments that they now are. Today, Baker spinnerettes are in use throughout the world.

The history of the spinnerette is a splendid example of the close cooperation of interdependent modern industries. As the synthetic fibre manufacturer demanded greater and greater precision, we provided it; as more and more holes to the jet were called for, we made them available; when improvements in alloys were needed, we developed them. The synthetic fibre industry is a dynamic industry, subject to frequent changes and the spinnerette manufacturer must be always alert to keep pace with them.

Recent developments are the use of synthetic fibres for the fabric of tires for heavy vehicles and their increasing use for those of light cars as well. The multifilament yarn for this purpose requires spinnerettes with as many as 1000 holes. Another is in improved methods for the production of staple fibre requiring spinnerettes with 3000 to 7500 holes and up to 25,000 have been called for. Most usual sizes are from .002" to .004" within a tolerance of plus or minus .0001".

We make spinnerettes for every process and purpose and into every one goes all the skill and knowledge acquired over the many years we have worked so closely with the synthetic fibre manufacturer.

NEW YORK · SAN FRANCISCO · CHICAGO
TORONTO · RIO DE JANEIRO · LONDON · COPENHAGEN · ZURICH



One of many large batteries of Webcell Dialysers now in operation in viscose rayon plants for the removal of caustic soda.

In the World's most modern RAYON PLANTS designed, built and operated by KOHORN

WEBCELL CONTINUOUS DIALYSERS

Webcell Continuous Dialysers are now in profitable operation in many fields for the recovery of acids and alkalis . . . removal of acids, alkalis or other non-wanted materials from solutions . . . purification of solutions and for the salvage of salable by-products.

THE OSCAR KOHORN COMPANY

has recommended and successfully used our equipment in viscose rayon plants erected by them in all parts of the world for the economical recovery of caustic soda.

For further information write for Bulletin 5B

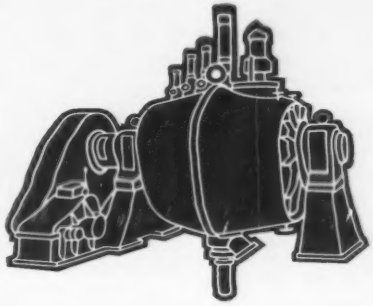
BROSITES MACHINE COMPANY INC.

50 CHURCH STREET Cable Address "Bromach" New York NEW YORK 7, N. Y.

Telephone—Digby 9 3600

In the World's most modern
RAYON PLANTS
designed, built and operated by
KOHORN

Baker Perkins
viscose production equipment



SHREDDERS
BARATTES
WET CHURNS
VISSOLVERS

deliver reliable uniform service

OSCAR KOHORN & CO. LTD. uses Baker Perkins equipment in Peru, Brazil, Egypt, Chile and throughout the world

BAKER PERKINS INC.

SAGINAW, MICHIGAN

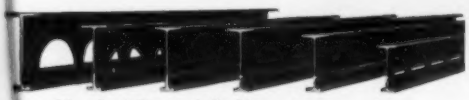
In the World's most modern
RAYON PLANTS
designed, built and operated by
KOHORN

The many advantages of Cleveland Tramrail equipment are enabling greater profits in KOHORN plants located in various parts of the world.

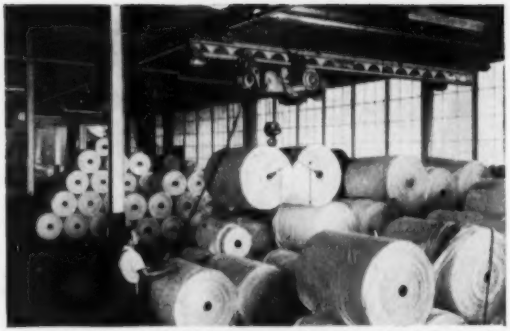
STANDARD ITEMS EASILY COMBINED TO HANDLE MATERIALS OF ANY KIND

Cleveland Tramrail raised-tread long-wear rail.

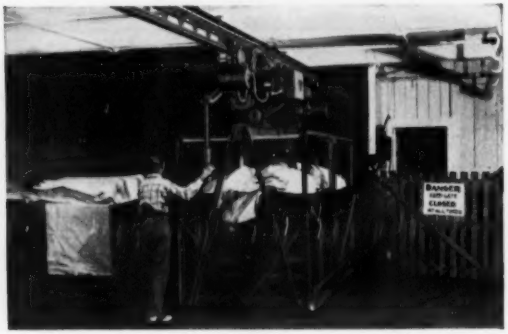
Cleveland Tramrail consists of standard items such as rail, switches, carriers, cranes, hoists, grabs, etc., which can be combined in a thousand-fold ways to serve nearly every materials handling requirement.



Cleveland Tramrail Archbeam in seven sizes for various loads and conditions.



Completely motorized floor-controlled Cleveland Tramrail crane in cloth roll storage makes it easy to handle rolls and pile them high.



Two floor trucks loaded with cloth are transported at a time, to a distant point without any operator accompanying, with this Cleveland Tramrail automatic dispatch system.

30,000 INSTALLATIONS

Hand propelled carrier built for long life and easy operation. Wheels have hardened tread and flange; bearings are double race type.

Backed by experience with 30,000 installations in industries of all types, Cleveland Tramrail representatives are in exceptionally good position to serve you. They will gladly advise, survey your plant, make layout or prepare quotation without obligation.

Motor-driven carrier with electric hoist. One of many types built by Cleveland Tramrail.

GET THIS BOOK!
BOOKLET No. 2008. Packed with valuable information. Profusely illustrated. Write for free copy

CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
8460 EAST 287TH ST. WICKLIFFE, OHIO.

CLEVELAND TRAMRAIL
OVERHEAD MATERIALS HANDLING EQUIPMENT

In the World's most modern

RAYON PLANTS

designed, built and operated by

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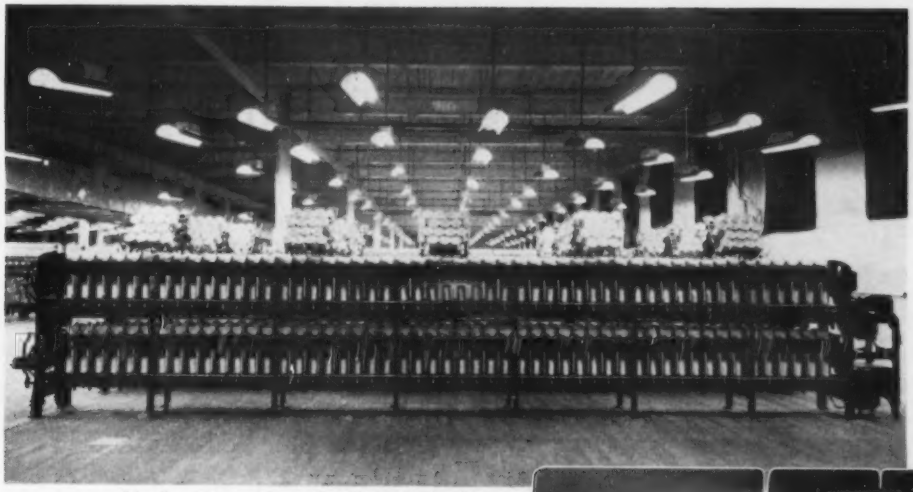
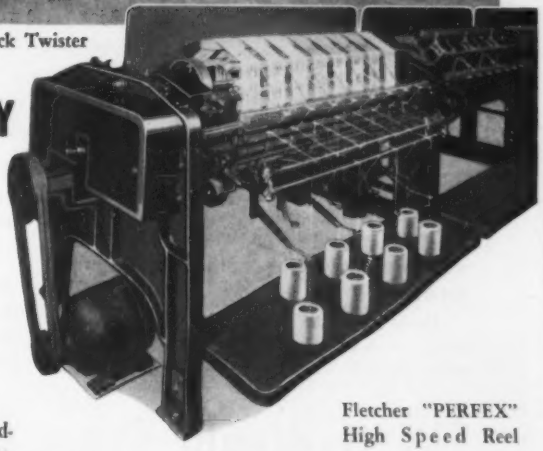


Fletcher Heavy Duty Double Deck Twister

for

THROWING MACHINERY

It's Fletcher ...



Fletcher "PERFEX" High Speed Reel

Accepted and installed by most modern rayon plants as standard equipment

FLETCHER WORKS

223 GLENWOOD AVE. **PHILADELPHIA 40,** ESTABLISHED • 1850

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RAYON PLANTS
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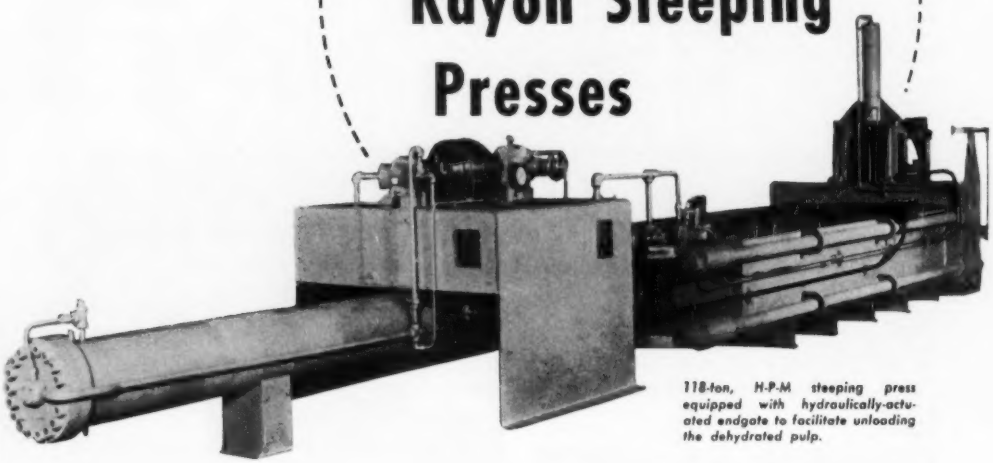
HPM

Rayon Steeping Presses



118-ton, H-P-M steeping press equipped with hydraulically-actuated endgate to facilitate unloading the dehydrated pulp.

The H-P-M steeping press is a self-contained, horizontal-acting hydraulic press with platen traversing in an open-top tank. Vertical plates divide the steeping tank into compartments which hold the sheets of pulp on edge.

These sheets of wood pulp, cotton linters pulp, or a combination of both materials, are steeped in the caustic soda solution contained in the press tank. After steeping, the tank is drained and the press removes the excess moisture in the pulp.

H-P-M steeping presses are built in sizes, up to 200 tons . . . and are the choice of leading viscose rayon producers the world over. Detailed literature and quotations furnished on request.

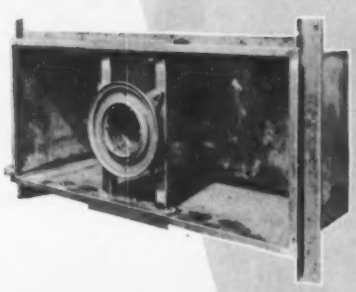
The Hydraulic Press Manufacturing Co.

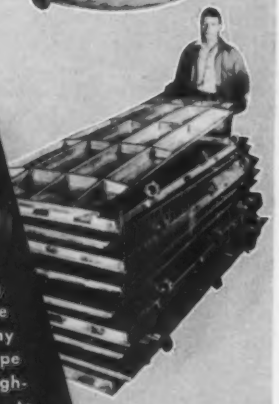
MARION ROAD, MOUNT GILEAD, OHIO, U. S. A.

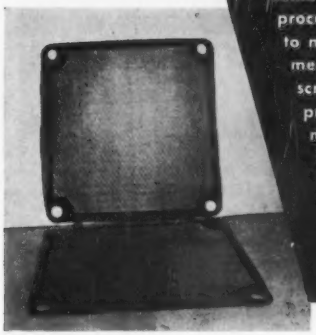
REVOLUTIONIZING PRODUCTION WITH HYDRAULICS SINCE 1877

Multi-Metal

WIRE CLOTH COMPANY, INC.
1350 Garrison Ave., New York 59, N. Y.
Telephone: Kilpatrick 2-2500

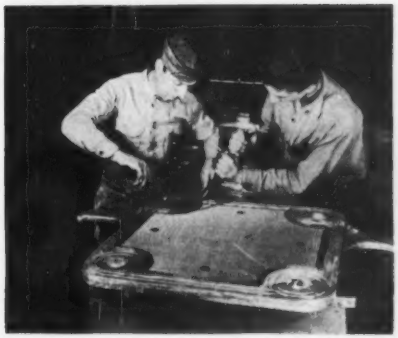


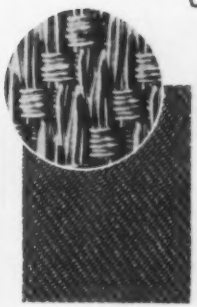


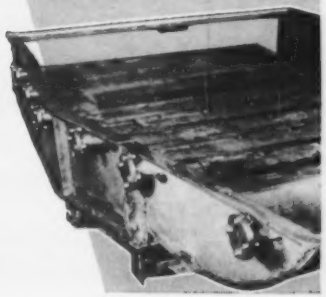


Multi-Metal Wire Cloth. Co., Inc., specializes in wire cloth and metallic filter cloth in Monel metal, pure Nickel and Stainless Steel alloys — combines these materials into intricate chemical process units — fabricates sheet metal and plate to meet customers' unique and unusual requirements. For example — alloy wire cloth backing screens and filter cloth covers for Plate & Frame presses, tailored to fit — strainers to meet any need — all-Stainless Steel equipment in Type 316 required by Kohorn process plants throughout the world. Our facilities are flexible, to process one unit or many — our engineering is adaptable, to meet design changes.

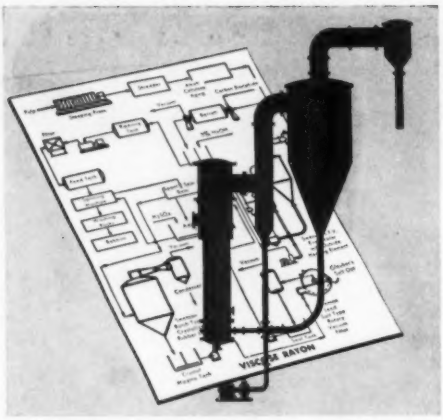
In the World's most modern
RAYON PLANTS
designed, built and operated by
KOHORN



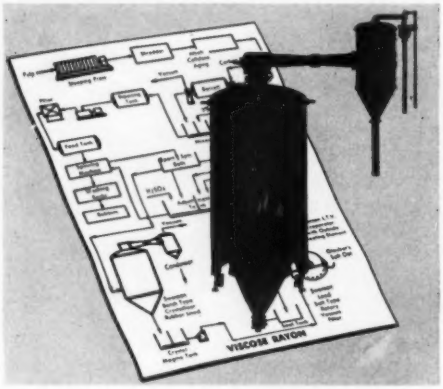




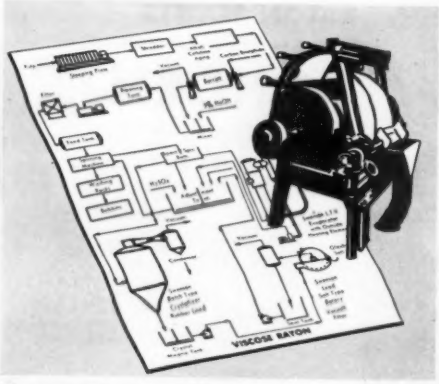
For more information, write direct or use Reader Service post card.



Swenson Long Tube Vertical Evaporator, specially constructed of rubber-lined steel with Karbate tubes and outside heating element. Concentrates spent spin bath.



Swenson Vacuum Crystallizer, for operation under conditions peculiar to the viscose rayon process. Gives high production yield. Built of rubber-lined steel.



Swenson Rotary-Drum Vacuum Filter built of lead and rubber-lined steel to resist acid attack. Assures long life and low cost in filtering out Glauber's Salt.

In the World's most modern
RAYON PLANTS
designed, built and operated by
KOHORN

SWENSON

co-operates closely with

Oscar Kohorn & Co. Ltd.

in furnishing

Spin Bath Evaporators

Vacuum Crystallizers

Acid-Resistant Filters

Karbate Tube Heaters

for new

Viscose Rayon Plants

in

Brazil—China—Peru

Czechoslovakia

Egypt

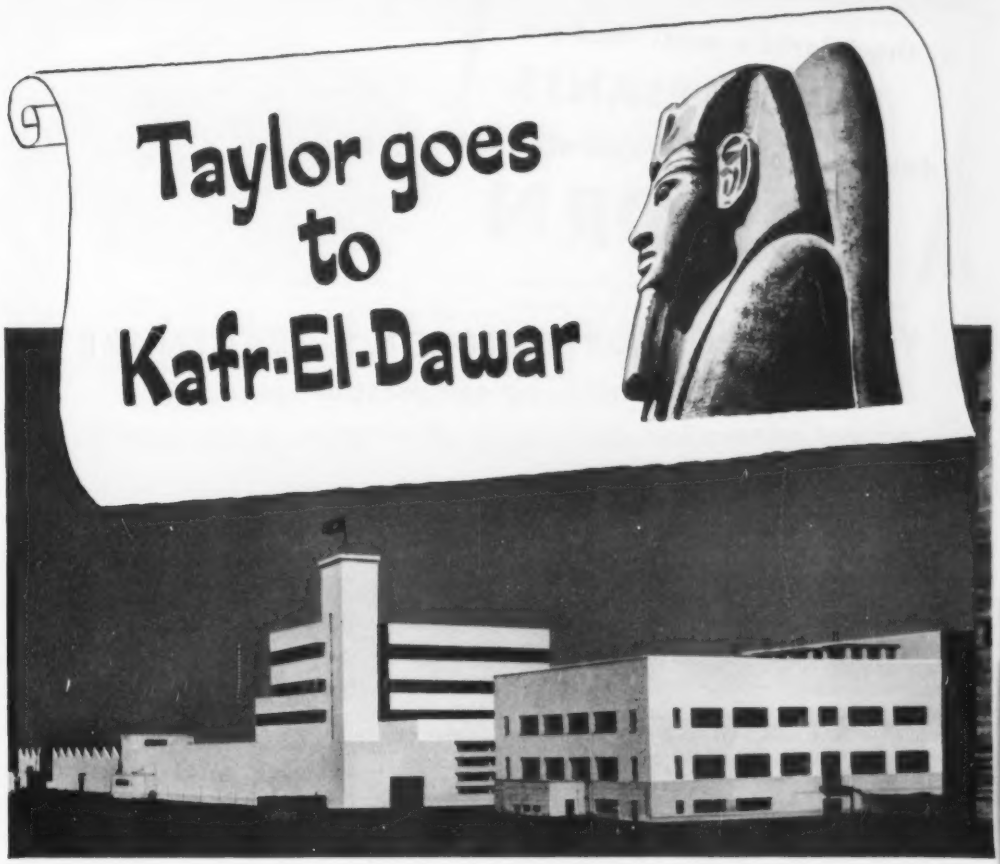
SWENSON

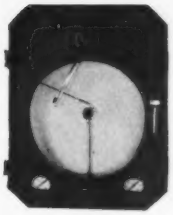
SWENSON EVAPORATOR COMPANY

Division of Whiting Corporation
15650 Lathrop Avenue, Harvey, Ill.
Eastern Sales Office and Export Department:
30 Church St., New York 7, N. Y.

For more information, write direct or use Reader Service post card.

Taylor goes to Kafr-El-Dawar





IN THE world's most modern rayon plants, designed, built and operated by KOHORN, you'll find Taylor Instruments. This picture shows the modern Kohorn rayon mill at Kafr-El-Dawar, Egypt, where, under Taylor instrumentation, extensive process control is effected with maximum efficiency and minimum cost. We're proud to say that Taylor Instruments are used widely in Kohorn rayon, staple fibre, tire cord, and cellophane plants throughout the world. In all phases of rayon production, Taylor Instruments have proven their ability to cut costs with accurate, dependable service. For example:

Instruments for rayon processing.

Instruments for preparation of rayon constituents.

Instruments for conditioning plant atmospheres to carry on these processes.

Whether your processing problems involve rayon or any other textiles, Taylor Instrumentation can help you. Ask your Taylor Field Engineer! Or write Taylor Instrument Companies, Rochester, N.Y., or Toronto, Canada.

Instruments for indicating, recording and controlling temperature, pressure, humidity, flow and liquid level.

Taylor's Centennial
ACCURACY FIRST SINCE 1851

Taylor Instruments
MEAN
ACCURACY FIRST
IN HOME AND INDUSTRY

 For more information, write direct or use Reader Service post card.

In the World's most modern

RAYON PLANTS

designed, built and operated by

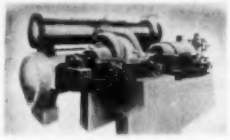
KOHORN

YOU'LL SEE WORTHINGTON'S TRADEMARK

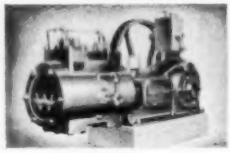
on air conditioning, air compression, pumping,

power generation and many other types of equipment

because Worthington's *complete line* of air conditioning and refrigeration includes the right equipment for each job. Shown is a Worthington centrifugal refrigeration compressor used in rayon plants for temperature and humidity control. Many plants also use Worthington reciprocating compressors for this purpose.

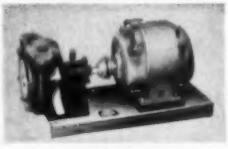


because no other air compressor can out-perform a Worthington. All types are made, all with the famous Worthington Feather* Valve—lightest, tightest, quietest ever made; all built for continuous, heavy duty. The horizontal compressor shown is made in 29 sizes, driven by steam or motor, capacities from 55 to 1987 cfm.



because Worthington makes the broadest line of pumps in the world, including such specialties as Worthite (stainless steel) centrifugal pumps (illustrated) for corrosive and abrasive liquids.

Shown also are a split-case centrifugal for general service and a rotary pump. Standard centrifugals come in capacities to 100,000 gpm, heads to 5000 ft; rotaries to 5000 gpm and pressure up to 500 psi, sizes 1½ to 16 in.



because other Worthington products—Diesel engines, steam condensers, feedwater heaters and deaerators, water softeners and pressure filters, power transmission equipment, etc.—reflect a vast engineering experience covering more than a century of service to industry all over the world. Worthington Pump and Machinery Corporation, Harrison, New Jersey, U. S. A.

*Reg. U. S. Pat. Off.

SERVICE FACILITIES

Associated companies, branch offices, and field representatives all over the world, including—

ASSOCIATED COMPANIES

ARGENTINA.. Worthington Ltd., Buenos Aires
AUSTRIA..... Worthington Pumpen und Maschinenbau G.m.b.H., Vienna
BRAZIL..... Worthington do Brasil, Ltd., Rio de Janeiro
CANADA.... John Inglis Co., Ltd., Toronto
ENGLAND.... Worthington Simpson Ltd., London
FRANCE..... Societe Worthington, Le Bourget (Seine)
ITALY..... Worthington Society Italiana Pompe e Compressori, Milan
MEXICO..... Worthington, S. A., Mexico, D. F.
SPAIN..... Bombas y Construcciones Mecanicas, Worthington, S. A., Madrid

FIELD REPRESENTATIVES

ALGERIA .... J. E. Roelker
ARGENTINA.. W. J. Wallace, Buenos Aires
BRAZIL..... W. C. Compson, Rio de Janeiro
CUBA..... J. G. Real, Havana
FRANCE..... W. A. Finn, Paris
HAWAII..... A. L. Luthropp, Honolulu
INDIA..... V. M. Booth, Calcutta
MEXICO..... J. J. Alves, Mexico, D. F.
TURKEY..... J. R. Hutchison, Istanbul
VENEZUELA.. R. S. Hull, Caracas

1.8

WORTHINGTON

THE SIGN OF VALUE AROUND THE WORLD

Two good reasons why

KOHORN specifies WESTINGHOUSE

As designer and builder of modern rayon plants, Oscar Kohorn & Co., Ltd., of New York, specifies electrical equipment that *must* stand up under the tough operating conditions of viscose rayon processing. That's why the name Westinghouse always appears on Kohorn specifications for electrical equipment . . . calling for such products as the new Lifeline squirrel-cage induction and wound rotor motors; manual or automatic full and reduced voltage starters; and open and metal-clad switchgear.

Two other dependable Westinghouse products specified by Kohorn are:

• ***Model EB-10 Bucket Spinning Motor*** drives buckets up to 7 inches in diameter at frequencies as high as 180 cycles, at 10,000 rpm. Shaft and adaptor automatically readjust the bucket for unbalanced mass at low speeds, rendering the motor virtually vibration-free. Once critical speeds are passed, the shaft assumes the position of fixed flexure and is free from reversing stresses . . . eliminating the need for continual check on bucket balance and wall concentricity.

• ***Micarta Spinner Bucket,*** reinforced with continuous steel banding around the sides, has top and bottom drainage, and is balanced both statically and dynamically within .5 grams.

To find out how Westinghouse products can help you turn out better rayon at lower cost, write to our Industry Sales Department.

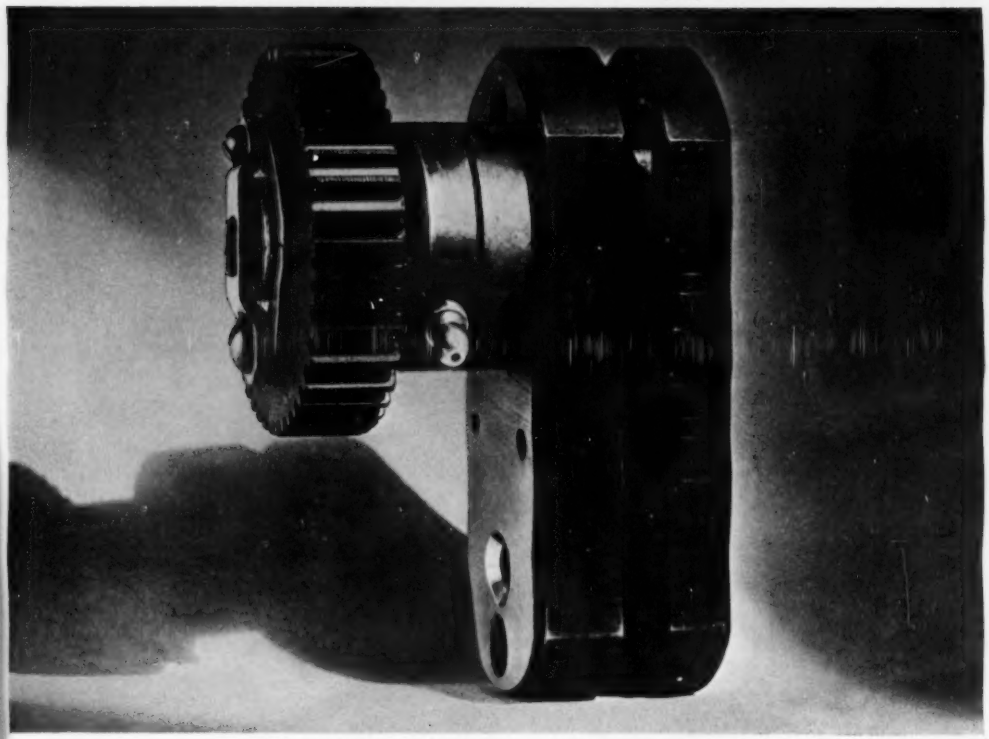
YOU CAN BE *SURE*
. . . IF IT'S

Westinghouse

WESTINGHOUSE ELECTRIC INTERNATIONAL COMPANY
40 Wall Street, New York 5, U. S. A.

In the World's most modern
RAYON PLANTS
designed, built and operated by
KOHORN

Oscar Kohorn & Company specify ZENITH SPINNING PUMPS in
all their rayon manufacturing plants

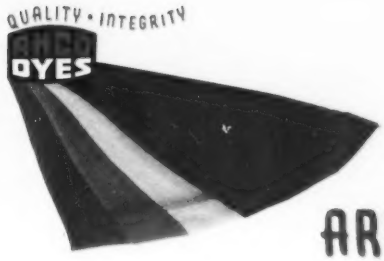


Zenith pumps are manufactured to the ultimate of high-precision standards. Such accuracy guarantees the uniformity of denier and also provides a long operating life, complete intechangeability of every part, and low operating costs. Consequently, the Zenith spinning pump is recognized the world over as the outstanding metering pump for all types of synthetic yarns.

ZENITH PRODUCTS COMPANY
58 CHESTNUT STREET, WEST NEWTON 65, MASS.

AHCOVAT DYES

In AHCOVAT DYES, as in all other products bearing the trademark AHCO, Arnold, Hoffman quality and integrity are your guide to superior performance.



✳ BRILLIANT ORANGE RK

This vat dye has outstanding light fastness and brightness of shade. It is especially recommended for use on towelings, curtains, upholstery slipcovers, etc.

Ask for complete technical information and shade card.

ARNOLD, HOFFMAN PROVIDENCE RHODE ISLAND

Associated with
Imperial Chemical Industries, Ltd.
(DYESTUFFS DIVISION)
England

ARNOLD, HOFFMAN & CO., INCORPORATED • EST. 1815 • PROVIDENCE, R. I.

Offices: Charlotte, Cincinnati, New York, Philadelphia, Providence
Plants: Charlotte, N. C. Cincinnati, Ohio Dighton, Mass.

Ask for a **PRIVATE REPEAT** *on* **HEMPHILL'S** *Atlantic City Show*

If, in your attempt to see everything at the Knitting Arts Exhibition, you missed part of the Hemphill Show, we will be glad to bring you a private repeat performance, right in your own plant.

Of course, there is a lot to see. In addition to the newest patterns and refinements on the famous Banner wrap-reverse, varipattern and solid color pattern machines, Hemphill shows six important new hosiery machines and a hard-working new attachment.

New Machines - *NEVER SHOWN BEFORE*

SCOP55. This is the world's first wholly automatic hosiery machine to knit a solid color pattern sock, *with an over-plaid* in one non-stop operation.

DRCS. The Dial Rib Cushion Sole machine knits socks to rigorous Government specification in a single, uninterrupted operation. It knits all sorts of work and sport hose, too, *with or without cushion soles.*

SCP-51. 84 needle. This solid color pattern hosiery machine knits with the same weight of yarn as is used in hand framed-socks. It has the color-change attachment.

COLOR CHANGE ATTACHMENT for SCP-1 machines eliminates eyelets and hand-tying by splicing the yarn and, at the same time, makes it possible to knit five colors in a single course.

HDS-300. 2½ inch. This latest Banner Dial Rib Machine eliminates hand transfers on true rib top anklets down to size 4.

HDR-300. 3 inch. Knits true rib top anklets up to size 9. No hand transfers!

NSKW. This 19 step wrap machine gives uniform, flashless plating. A new Banner development measures each stitch.

READY TO SERVE YOU

All Hemphill offices are ready and anxious to reconstruct our exhibit for you. To do this, Hemphill has prepared photographs, folders, and samples and will bring you first-hand reports.

IN YOUR OWN PLANT

A Hemphill Sales Engineer will be glad to help you investigate the profit-possibilities of these, and all other Hemphill Banner machines.

Just telephone or write

HEMPHILL BANNER MACHINES
Shaping Hosiery's Fantasies All Over The World!

HEMPHILL COMPANY PAWTUCKET, RHODE ISLAND, U.S.A.

Makers of Banner ® Automatic Hosiery Machines

OFFICES: Empire State Bldg., New York 1, N. Y. Security Bank Bldg., High Point, N. C.
Latin American Export Office, 25 Beaver St., New York 4, N. Y.

Anywhere in Textile America . . .

this *specialist*
in Yarn Carrier
selection
and application
is located nearby

Wherever your mill is situated . . . North, South, Canada, California . . . it's not far from the headquarters of some sales representative of the U·S Bobbin & Shuttle Co.

Each U S sales representative is a *specialist* in the selection and application of bobbins, shuttles and other U S products. Each devotes *full time* to helping millmen get top efficiency and economy with yarn carriers in every processing operation, from fiber to fabric.

And every U S representative is backed by a carefully integrated manufacturing and distribution system which is unmatched in the industry.

Every facility, from forest to frame — from logging to looms — is U S owned and controlled — the reason why the U S 93-year reputation for topmost quality can be steadily maintained.

U S is ready, now, to equip your mill with the cost-cutting new designs in yarn carriers you need to beat today's cost squeeze. The U S representative near you will call at your request to discuss your requirements. You'll find that most U S products can be delivered when you want them, without delay.

U S TIMBER PROPERTIES AND ROUGHING MILLS

Selected hardwoods from extensive U S owned timber lands are formed into blanks and conditioned in modern kilns at U S roughing mills.

U S MANUFACTURING PLANTS AND SALES OFFICES

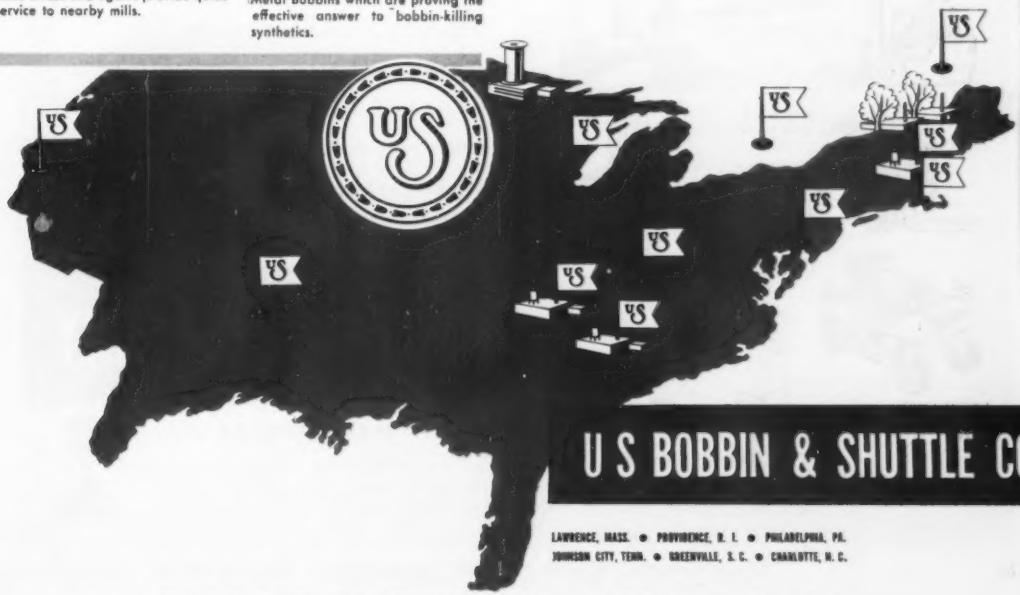
From the rough blanks, bobbins, shuttles and other wooden yarn carriers are manufactured in U S plants located near the centers of textile manufacture, North and South. A sales office operates in each of these plants.

OTHER U S SALES OFFICES AND AGENTS

Conveniently located in all other textile producing areas, U S separate sales offices and agents provide quick service to nearby mills.

PLANT FOR MANUFACTURE OF ACROPAK METAL BOBBINS

Acrometal Products, Inc., a U S subsidiary, produces the ACROPAK Metal Bobbins which are proving the effective answer to bobbin-killing synthetics.



U S BOBBIN & SHUTTLE CO.

LAWRENCE, MASS. • PROVIDENCE, R. I. • PHILADELPHIA, PA.
JOHNSON CITY, TENN. • GREENVILLE, S. C. • CHARLOTTE, N. C.

CHICAGO: Albert R. Brose, 80 E. Jackson Blvd. • LOS ANGELES: E. G. Paules, 1782 W. Vernon Ave. • CANADA: W. J. Westaway, Montreal, Que., Hamilton, Ont.

How to make your HYSTER LIFT TRUCKS last more years

Put yourself in the hands of your Hyster Company dealer. He can keep your lift trucks running better at lower cost. He has factory trained mechanics who *know* Hyster equipment. He backs up skilled mechanical knowledge with an efficient parts department.

Service is his business. And with Hyster lift trucks hard to get, we suggest that you rely upon your dealer to keep your equipment working at full capacity longer.

HYSTER COMPANY

THREE FACTORIES

2922 N. E. CLACKAMAS ST. . . . PORTLAND 8, OREGON
1822 NORTH ADAMS STREET. . . PEORIA 1, ILLINOIS
1022 MEYERS STREET. . . . . DANVILLE, ILLINOIS

G-E loom motors

fit loom-load needs, keep output high!

IN STANDARD...

Here are two truly modern G-E loom motors—standard and flywheel—with speed and torque features specially designed to minimize speed fluctuations caused by the pulsating loom load. Even under the added picking load caused by today's heavier shuttles, they maintain loom speeds at a consistently high average level, permit maximum output of quality fabric.

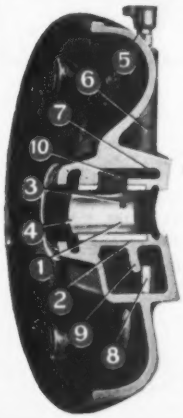
On many looms, the G-E flywheel loom motor permits still higher loom speeds by reducing speed variations even further. Start marks are minimized, loom operation is improved. And often you can use a G-E flywheel motor one size smaller than the standard loom motor.

Top performance—low maintenance!

New end-shield design, cast-iron totally enclosed construction for ample physical protection, G-E high-quality insulating materials for electrical reliability, and a host of convenience features for easy installation and maintenance—all these add up to top performance in both motors that closely matches exacting loom needs.

Find out more about these G-E standard and flywheel loom motors. Check with your G-E representative or your loom manufacturer, and write for Bulletin GEA-5011-C.
General Electric Company, Schenectady 5, N. Y.

...OR FLYWHEEL TYPES



Longer bearing life, easier lubrication both assured by new end-shield design

Here's the inside story:

One-piece bronze bearing lining (1) is solidly supported by end-shield casting (2), assuring accurate alignment. Set screw (3) anchors bearing lining to end shield casting. Bearing thrust surface (4) is all bronze.

Easily-accessible oil filler (5) speeds filling through large cast-in oil pipe (6). Oil flows directly to reservoir (7) through opening, with oil overflow standpipe (8) quickly indicating when full. Baffle (9) prevents yarn packing (10) from plugging standpipe or oil path.

How textile mill modernization improves fabric quality and cuts costs is shown in the new G-E More Power to America movie "Textiles Unlimited." Your nearest G-E office will gladly arrange a showing

GENERAL ELECTRIC

A Full Line of Loom Necessities

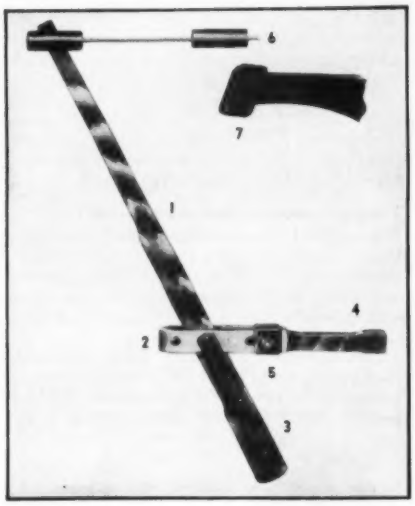
Including Those Shown Here—All Made By

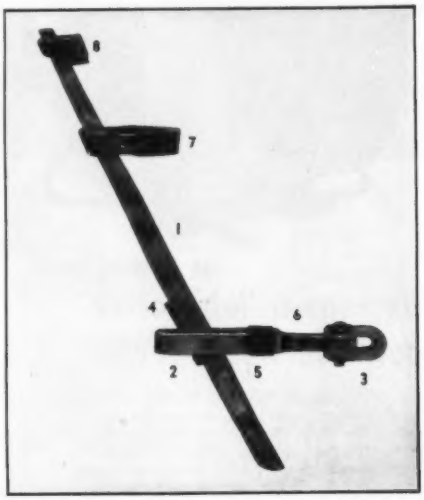
JACOBS

THESE Weaving Loom Necessities illustrate only a few of many standard items in common use—available in many styles, materials, shapes, and constructions—developed to any loom or individual mill needs and preferences.

Crompton & Knowles

1. Picker Stick
2. Lug Strap
3. Power Adjustor
4. Sweepstick
5. Lug Washer
6. Tubular Spindle Bumper
7. W-Type Bunter





Draper

1. Picker Stick
2. Lug Strap, long
3. Lug Strap, short
4. Holdup Strap
5. Lug Washer
6. Connector
7. Check Strap
8. Loop Picker

THE BULLARD CLARK COMPANY

JACOBS

SOUTHERN Division Charlotte, N. C.

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KNIT OR WEAVE

Quality-controlled

STANDARD *Durene**

helps you beat schedules

Even when the pressure's on full for production, Standard Durene gives you top performance . . . knit and woven goods of unmatched uniformity and smoothness.

Standard-Coosa-Thatcher Co.

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NEW YORK 16, N. Y. 185 MADISON AVE.	CHICAGO 54, ILL. MERCHANDISE MART	PHILADELPHIA 9, PA. 123 S. BROAD ST.
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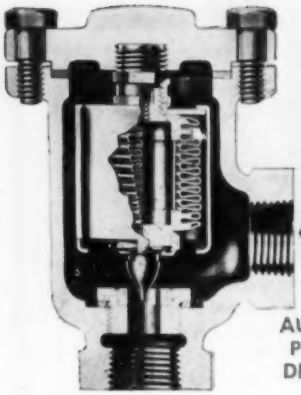
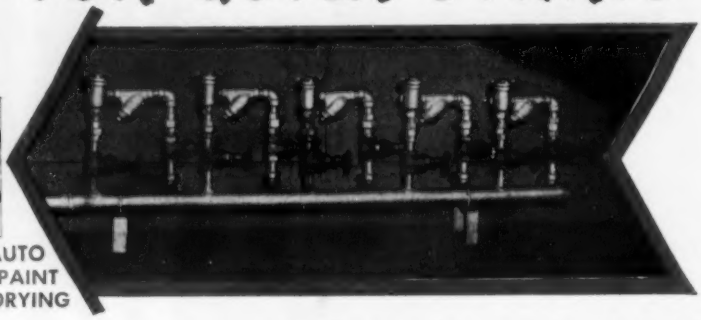
REPRESENTATIVES IN CANADA, CENTRAL & SOUTH AMERICAN COUNTRIES

Standard Durene • S-C-T Cotton Industrial Threads

*Reg. U.S. Pat. Off.



FOR QUICK STARTS

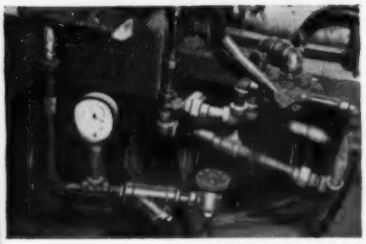


AUTO PAINT DRYING

SARCO No. 9 THERMOSTATIC STEAM TRAP

. . . AND STEAM ECONOMY

The hours of waiting in the morning for steam equipment to warm up can be reduced to minutes with the Sarco No. 9 thermostatic steam trap. It is wide open when cold. All air and condensate pass quickly. Then, during normal operation, condensate is discharged at a temperature within 10°F of that of the steam. This has given the trap double its former capacity. No seat changes are required for varying pressures within the range of each type from 0 to 300 p.s.i.



END GLUING

BOTTLE WASHING

PUT ONE ON EACH COIL

This trap is so inexpensive that one can be placed on each coil or jacket and thus save enough in fuel and increased production to pay for the hook-up in a short time. The Sarco No. 9 is used extensively for process tanks, steam lines, radiators and wall coils, tracer lines and outdoor applications of all kinds. Ask for Catalog No. 250-A.

314

SARCO SAVES STEAM

SARCO COMPANY, INC.

Represented in Principal Cities

Empire State Building, New York 1, N. Y.

SARCO CANADA, LTD., TORONTO 5, ONTARIO

IMPROVES PRODUCT QUALITY AND OUTPUT

Mr. J. C. Hewitt, Master Mechanic of Whitney Manufacturing Company, Whitney, South Carolina, says:—"The first Gates Vulco Rope Drive we put on our weave room lineshaft has now been running 5 years and 9 months and is still going strong. We have naturally used Gates Vulco Ropes for all of the other lineshaft drives."

This test shows how the Concave Side gives you a real saving in V-Belt costs

If you are interested in lower operating costs, make this simple test:—

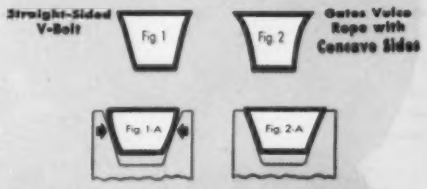
Take *any* V-belt and bend it as it bends in going around a pulley. As the belt bends, grip its sides with your fingers and thumb. You will *feel* the sides of the belt *bulge out!*

This bulging gives a straight-sided V-belt the shape shown in figure 1-A. (See diagrams at right.) Clearly, this shape does not fit the sheave groove. The sides of the bulging belt are forced to press unevenly against the V-pulley—and this concentrates the wear along the *middle* of the sides.

But when you bend a V-belt that is built with the *Concave Side*, you find that the sides become perfectly straight—as shown in Figure 2-A. This shape precisely fits the sheave groove.

Because there is *no bulging*, the sides of the Gates Vulco Rope always grip the *full* face of the V-pulley *evenly* and therefore wear *uniformly*—resulting in *longer belt life* and *lower belt costs for you.*

What Happens When a V-Belt Bends



How Straight-Sided V-Belt Bulges in Sheave-Groove. Sides Press Unevenly Against V-Pulley Causing Extra Wear At Point Shown by Arrows.

The Concave Sides Fill Out to a Precise Fit in the Sheave Groove. No Side Bulge! Sides Press Evenly Against the V-Pulley—Uniform Wear—Longer Life!

Only V-belts made by Gates are built with concave sides. Whenever you buy V-belts, be sure you get the V-belt with the Concave Sides—The Gates Vulco Rope!

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Multiply effective time of maintenance men with this matched pair

How much time do your maintenance men spend lubricating motors—or servicing starters? It is valuable time which could be applied to other equipment. Take the case of a southern mill for example:

THEY THREW GREASE GUNS AWAY—and freed men for other important maintenance. Here's how. In this mill, 75 motors drive knitting machines. Formerly, they were lubricated weekly. Four years ago, Life-Line motors were installed. ALL have been operating four years—continuously 16 hours a day, 6 days a week. Yet, they *never* have been lubricated. There have been no outages.

Maintenance men carry only an oilcan for oiling knitting machines. Lubrication time has been cut in half, releasing them for time on other equipment to keep it in top running shape.

BUT THAT'S ONLY HALF OF THE STORY. Life-Linestarters® cut maintenance two more ways. They reduce motor burnouts through the positive protection afforded by the bimetallic disc. They require minimum servicing. Exclusive "De-ion®" grid confines, divides, and extinguishes arc—increasing contact life.

Together Westinghouse Life-Line motors and Life-Linestarters are your best defense against outages . . . your best bet to free maintenance men for other duties. Why not get the advantages of this matched pair?

Call your nearby Westinghouse representative for data on the complete line of Life-Line motors and starters. Ask for copies of "Life-Line Motor Book", B-3842, and "Tomorrow's Starter Today", B-4677. Westinghouse Electric Corporation, P. O. Box 868, Pittsburgh 30, Pennsylvania. J-21429

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Life-Line

MOTORS and CONTROLS

AMCO Humidification System in weave room of Broad Brook Company, Broad Brook, Conn.

Control regain and assure a

BETTER WOOL PRODUCT ...INCREASED PROFITS!

AMCO system in spinning room of same mill

You may be losing more than you think if yours is a "dry-air" mill.

Total weight, after all, is dry wool plus moisture. So when moisture in the air is abnormally low, moisture from the wool evaporates into the air — at the expense of the wool you are processing. Is it any wonder that profits begin to dry up when the air dries out?

AMCO Humidification keeps the air, your biggest single asset, "liquid". It governs surrender of regain; assures better control of weights and yarn counts; reduces fly; improves end products by preserving flexibility, resiliency and pliability. And very important . . . that perennial trouble-maker, static electricity, is effectively routed. All good reasons why it will pay you to consult a trained and experienced AMCO engineer without delay.

Should you already have a modern, efficient humidification system and seek to add *cooling*, AMCO can help you with that job, too. Whether you propose installing a ductless system, a unit duct, or a central station air conditioning system, AMCO can tailor-make an installation to fit your specific needs.

Benefits of controlled humidification

- Elimination of static electricity
- Higher yarn yields
- Less fly waste
- Oil savings through decrease in employed emulsions
- Greater spinning, dressing and weaving efficiency due to retention of moisture in yarn
- More flexibility, resiliency and pliability of yarn
- Better control of cloth weights.

Amco Self-Cleaning Atomizer

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2

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3

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Syton is compatible with a wide variety of finishing agents. No curing or aftertreatment is necessary.

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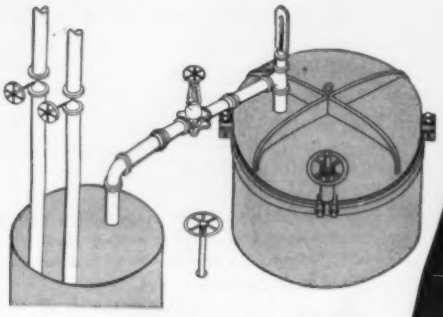


The Installation—Phoenix Dye Works, Chicago, Ill.

PROBLEM: To find a durable replacement valve for dye line on package dye machine. Various cocks and valves tried, lasting only a maximum of 1 to 2 months, with much leakage, sticking, and maintenance.

WORKING CONDITIONS: Valve almost constantly in contact with varying acid dye solutions, at temperatures ranging from 50 to 210 degrees F. Operated about 100 times daily, often with disc in throttling position.

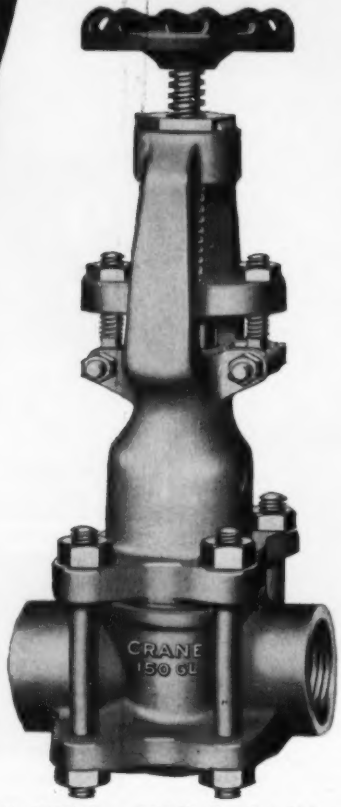
SOLUTION: Crane No. 18850, all 18-8 Mo Stainless Steel Plug Gate Valve.

RESULT: User reports: after more than 3 years' uninterrupted service, no leakage through valve . . . no sign of corrosion . . . no maintenance expense . . . unusually easy operation. Enthusiastic about performance of Crane Plug Gate Valves.

. . . Another typical example of the long life and low-cost upkeep that Crane Quality Valves are famous for. And that's why . . .

More CRANE VALVES are used than any other make!

Rely on Dependable CRANE VALVES



No. 18850 Crane 18-8 Mo Plug Gate Valve for throttling or full-flow service. (No. 17750 in Monel.) Send for new folder AD-1855.

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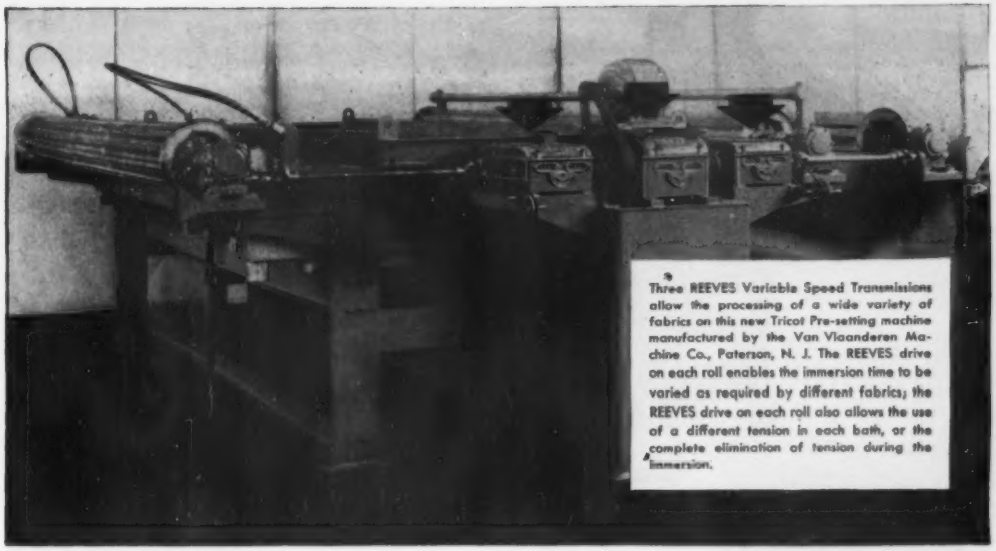
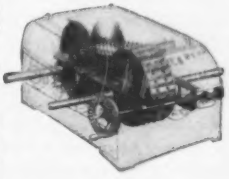


Three REEVES Variable Speed Transmissions allow the processing of a wide variety of fabrics on this new Tricot Pre-setting machine manufactured by the Van Vlaanderen Machine Co., Paterson, N. J. The REEVES drive on each roll enables the immersion time to be varied as required by different fabrics; the REEVES drive on each roll also allows the use of a different tension in each bath, or the complete elimination of tension during the immersion.

REEVES Variable Speed Transmission

Operating Principle



REEVES Variable Speed Transmission embodies the proved operating principle of a V-belt driving between two pairs of cone-shaped discs, mounted on parallel shafts and adjustable to form an infinite number of driving and driven diameters. One shaft receives power at constant speed from motor, line shaft, etc. Other shaft delivers power at infinitely variable speeds to driven machine. Each speed setting is held without fluctuation. Operation is practically noiseless.

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Recognized leader in the specialized field of speed control engineering

accurate • variable **REEVES** *Speed Control*

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1 Incorporates the REEVES operating principle—proved in 300,000 installations—which assures *accurate, positive* delivery of any desired speed within the entire speed range, without stopping the machine.

2 Makes "changeovers" easier—utilizes the machine's *full* capacity—by providing the *right* speed—with the turn of handwheel or touch of button—for every operation and every operator, under every changing condition.

3 Wide choice of vertical and horizontal models—capacities up to 87 hp; in speed ratios as great as 16 to 1; manual, electric, hydraulic or completely automatic controls; suitable for mounting in any position.

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Profit from REEVES Speed Control in your mill—*see immediate results.* Send for full details on REEVES Speed Control—ask for catalog No. W 74-G.

IT HOLDS YOUR COSTS DOWN!

Here's just one of the many little things that are designed into Baldwin-Rex Roller Chains to add extra life . . . cut your maintenance and repair costs! Pin ends throughout the entire line are *copper plated!* Here's what it means to you:

1 LONGER PIN LIFE

Copper plating on pin ends permits case hardening of the bearing surfaces of the pin to the optimum degree. This file-hard surface assures longest pin life.

2 LONGER CHAIN LIFE

Since copper will not absorb carbon during heat treatment, pin ends remain relatively soft, permitting more secure riveting. Soft ends permit "upsetting" of the pin in the side plates, assuring tight fit with no possibility of destructive rotating in the plates. It assures "greater holding power" of the pin in the side plates. No "weak links" in Baldwin-Rex Chains caused by poor riveting!

3 EASIER CHAIN CUTTING

Comparatively soft pin ends can be easily ground off prior to driving out the pins or pin links. Thus, if disassembly is necessary, it can be quickly and easily done.

The longer chain life made possible through the copper plated pins is but one of the many Baldwin-Rex extra advantages that add up to lower costs to you. For the complete story, write for your copy of Bulletin 50-70. BALDWIN-DUCKWORTH, Division of Chain Belt Company, 346 Plainfield Street, Springfield 2, Mass.

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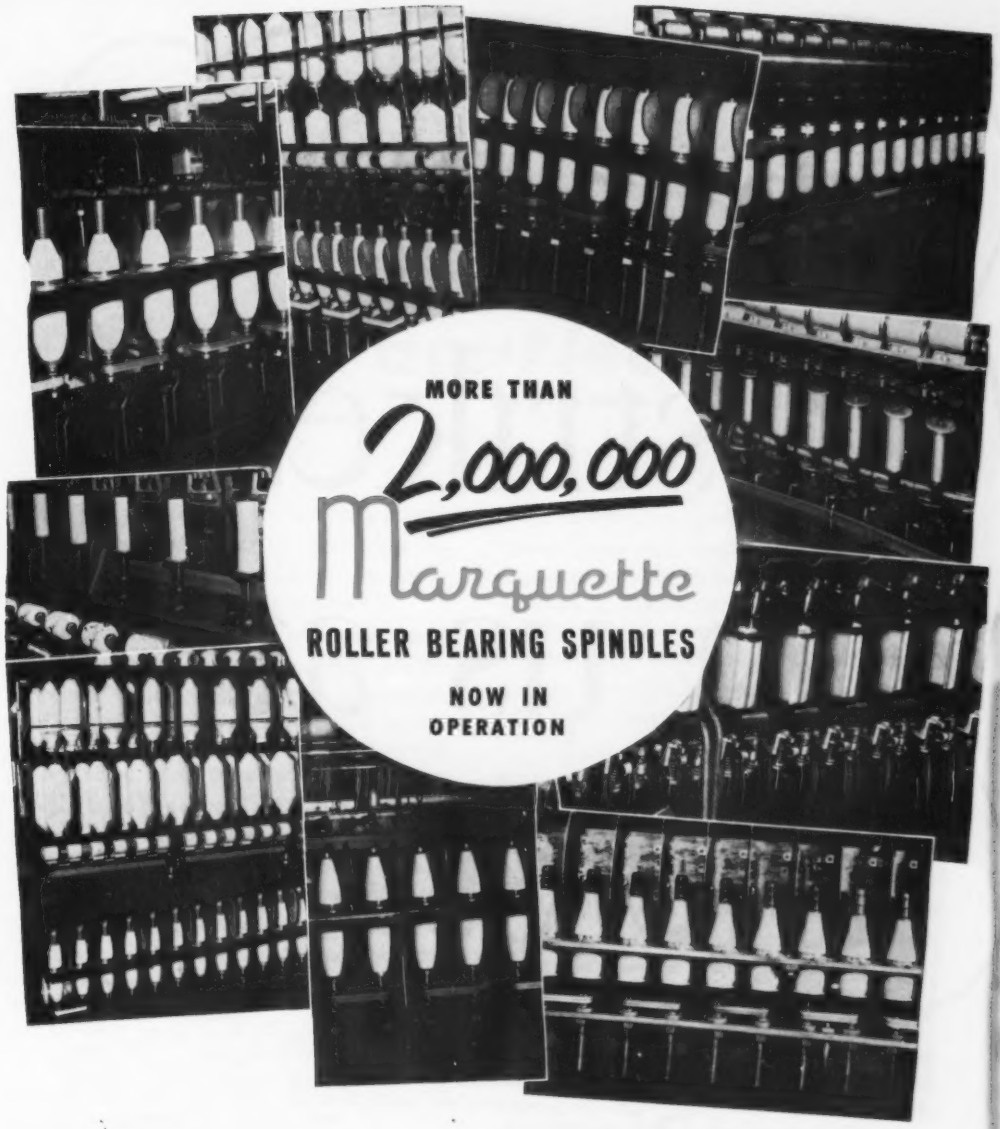

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Full-Fashioned Knitting Machine

We Mobilize for Freedom

WHY Controls are Necessary

One of the encouraging characteristics of the American people is their dislike for government controls. This augurs well for the future of their economic and political freedom.

But for the next few years we must not only tolerate but also help to make effective a whole battery of emergency government controls over our economic life. If we fail to do this now the future of that freedom we cherish will be imperilled. It is the purpose of this editorial—the third in a special series—to explain in simple terms why this is so.

After our military victory in World War II, we rushed through a demobilization which cut our military strength to about one-tenth of its wartime peak. Our allies did much the same thing. But the Russians maintained much of their wartime military strength and built up that of their satellites. With prodigious speed we switched from military to civilian production and went on to enjoy a rousing postwar boom—the greatest in our history.

This boom was in vigorous progress when, on June 25 last year, the Russian-sponsored North Korean army attacked South Korea. Our industrial production was rolling along at almost twice its prewar level. We had labor shortages in many key industrial areas. Under the impact of heavy buying all along the line, prices were climbing.

When the North Koreans smashed into South Korea they smashed into our national consciousness this fact: if we want a fair chance to save our national freedom from destruction by Communist aggression, we must race to restore some of the military power we had so speedily written off after World War II. And we must do it with our resources already very fully occupied with a boom in civilian business.

Program Small Compared to World War II

Compared with our military effort in World War II, the mobilization on which we are now embarked is small. At its peak, under present schedules, it will absorb no more than one-fifth of the total national production. During World War II we reached a point when nearly half of our total production went for war-making.

Moreover, our economy now is much bigger and stronger than it was in World War II. During the last decade there has been an increase of about 15 percent in our labor force. Our workers have had the training advantage of steady employment. The capacity of our industrial establishment is two-thirds again as great as it was ten years ago. Since the war no less than $70 billion has been spent to expand and modernize it.

Given time, the industrial giant we have created could pick up in its stride the added load of production for defense that now is con-

templated. But speed is of the very essence. There is little dissent from the proposition that if we are to stand off Russian aggression successfully we have, at the outside, two years in which to get ready.

Controls Needed to Prevent Chaos

These two facts – (1) the necessity for speed in our rearmament program and (2) an economy already stretched taut by a record civilian boom–create the general necessity for government controls. If we simply pile the billions of added defense expenditures authorized since last June on top of the civilian boom, and let it go at that, two destructive developments would follow. There would be a scramble for scarce materials, notably metals, which would create chaos in those markets. And prices would go through the roof.

Our situation during this mobilization is radically different from what it was when we rushed to get ready for World War II. Then we started with an economy that was coming out of a long depression. There was plenty of slack. Even in mid-1941 we still had over 6 million unemployed. Thus it was possible for us to expand war production greatly and also increase civilian living standards before the limits of our productive capacity made extensive controls necessary. But as we begin this new mobilization we find our economy already operating virtually at capacity. This fact is of key importance in understanding why this relatively small defense program so quickly requires the imposition of controls.

The selection and administration of controls thus far has been badly bungled. The threat of price controls, for example, was broadcast so vigorously and for so long that our people were virtually asked to raise prices and thereby do much to defeat the controls. Adequate taxation directed so as to attack inflation at the source and thus give direct price control a chance to operate has not yet been provided.

Indeed, we could readily assemble a long and devastating catalog of the deficiencies of the government's control program. But that would not dispose of the necessity for controls – by priority, by allocation, and, as a stop-gap, by direct prescription of selling prices – if we are to carry out our mobilization successfully. That is the only means by which a clear right of way for defense production can be cut through the highways of trade and commerce now jammed with civilian boom business.

Hope In The Wilson Plan

Since he became Director of Mobilization, Charles E. Wilson has added a new element of order and hopefulness to the mobilization program. He has laid out a plan which, if we are spared all-out war, would do three things by 1953. First, it would produce the weapons needed by our army and our allies to meet an immediate threat. Second, it would create the capacity that would enable us to move at high speed into weapons production for all-out war – if necessary. Third, it would create the additional production capacity that would restore by that date our ability to resume the climb of the American civilian standard of living.

In technical and industrial terms the Wilson Plan seems to be feasible. If it is successfully carried out, we should be able to begin getting rid of controls rapidly by 1953. But to carry out the program successfully, it must now have vigorous support from everyone. That does not mean mere agreement that it is a good plan. It means that we must conform to the controls that are necessary to make the plan work. In developing this support, the business community is in position to exercise crucially important leadership.

As has often happened in our national history, we are confronted by a paradox. We must accept emergency controls for the time being to insure survival of the freedom that they infringe. But, as we do this, we may find some comfort in the reflection that while controls from Washington are hateful, controls from Moscow would be infinitely worse.

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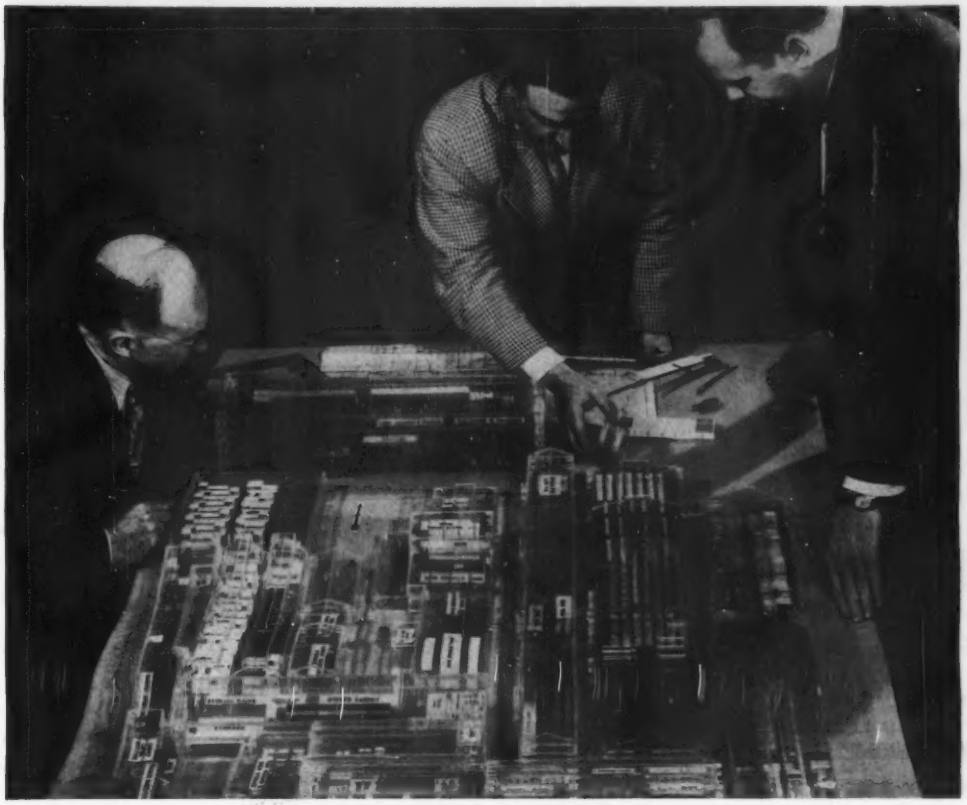


We Use a PLASTIC MODEL To Help Solve Big-Plant Problems

By **HAROLD M. CATLIN,** *Manufacturing Engineering Manager, Bigelow-Sanford Carpet Co.*

TRYING TO VISUALIZE and plan changes in flow or arrangement in a mill that has over 25 buildings and covers 40 acres is a tough job for the best of engineering staffs. That's the problem that we faced in our Thompsonville, Conn., plant until we simplified it by making a three-dimensional plastic model of the entire plant.

The model, shown in the photo above, can be completely disassembled floor by floor and machine by machine so our engineers can get right down to details in planning. Scale models of equipment were cut to the approximate shape of the machines themselves and are colored to designate type and size of machine.

The scale of the three-dimensional model is 1 in. to 20 ft., and the entire unit fits on a table 6 ft. long by 4 ft. wide.

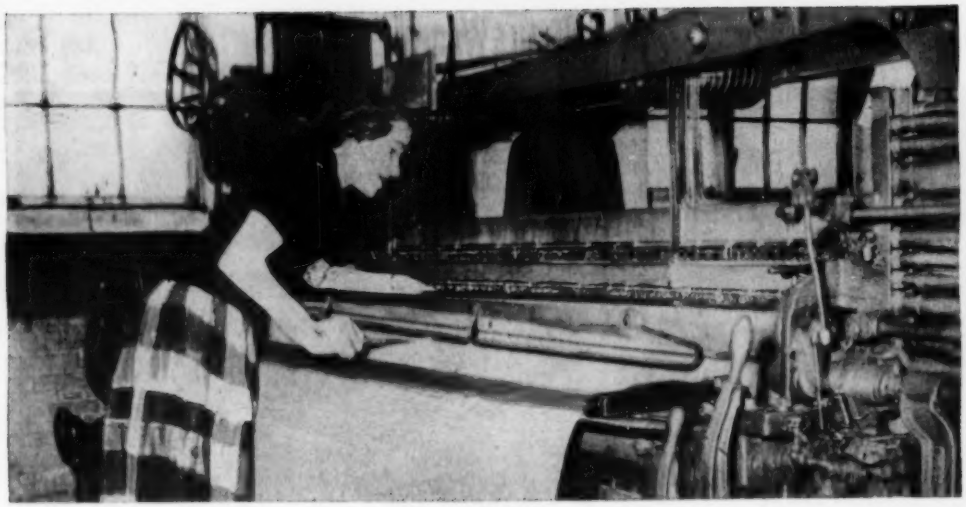
The model was originally made to help Bigelow engineers study more effectively a complete rearrangement of the Thompsonville mill. The model continues to serve for:

All studies of general rearrangement.

Explaining operations and sequence of processes, particularly to those not well acquainted with the plant layout.

Discussions of equipment rearrangement with plant supervisory staff.

Studies of over-all material movement, handling, and storage problems.



Uniform LOOM SETTINGS
Are a "Must" for 18-Oz. Serge

▸ *Having trouble weaving 18-oz. government serge? If so, check your looms to see if you have uniform settings of—*

- *Temples*
- *Crank arms*
- *Harnesses*
- *Warp stop motion*
- *Harness stop motion*
- *Whip rolls*

By **EUGENE P. SCHREMP,** Consulting Editor, TEXTILE WORLD

MILLS THAT HAVE WOVEN 18-oz. government serge have found by experience that certain precautions are necessary to insure quality and production. Uniformity of loom settings and adjustments cannot be overstressed. If each loomfixer has his own ideas as to loom settings, there is a possibility that some of the pieces will have a different appearance when finished. Looms adjusted to weave lightweight fabrics must be readjusted to give best results.

Proper preparation should begin in the dressing department. Beam flanges should be trued up and tightened on the beam barrel. Flanges out of line will cause high and low places when the warp is beamed. In the weaving of warps from beams with out-of-line flanges, temples will not hold properly; ends will chafe and break at listing.

Harnesses should be checked in the drawing-in room for loose hooks and cracked frames. If there are any frames in poor condition, they should be discarded. This heavy type of fabric causes considerable strain on the harness motion.

Looms should be well cleaned and lubricated before a warp goes in.

Temples must hold the cloth out properly. If a single temple causes trouble, some sort of double temple may be used. A new type that has the back roll set about 3 in. behind the front gives good results on heavy serge. A small clamp-on temple that acts as an auxiliary may also be used to good advantage.

CRANK ARMS. Crank arms should be checked for proper adjustment. At front center, there should be 5¼ in. from the inside reed line to the inside of the breastbeam on most woolen and worsted looms. It is very important that each crank arm be the same length; otherwise, the lay will not be parallel with the breastbeam.

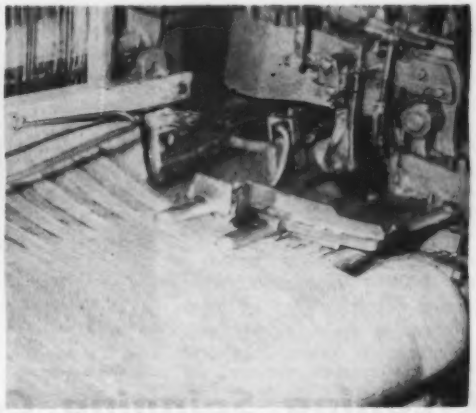
If spring shock-absorbing crank arms are used, the tension on the spring should be checked. A weak spring will cause the crank arm to give, and the lay will not come all the way up to front center at each pick. This condition may prevent proper transferring of the filling bobbin.

Harnesses should be so set that the shed is large enough for the shuttle to go through without being trapped by the warp ends. Adjustment is made by moving the jack eye into different notches on the harness jacks. The size of the shuttle will have a bearing on this setting.

Adjustment of the warp stop motion is important. The stop-motion frame should be set about ¼ in. below the level of the whiproll. This setting will allow the drop wires to move up and down with each change of the harnesses. Movement of the drop wires helps prevent ends from sticking together. This movement is especially helpful when a warp-tying machine is

(*Continued on page 198*)

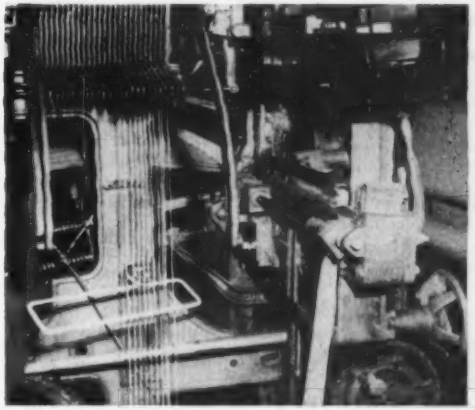
BEAM FLANGES must be tight and true. If not, you'll get chafed and broken ends.



DOUBLE TEMPLES grip heavy serge better than a single temple. The single temple may cut.

CRANK ARMS should be set 5¼ in. from reed line to breastbeam. Have all the arms the same length on serge looms.

WARP STOP-MOTION FRAME should be ¼ in. below the whiproll to help keep drop wires free of lint.



HARNESS STOP MOTION at lower left, connected to the electric warp stop motion, helps prevent pick-outs and skips.

TAKE-UP-ROLL COVERING can be checked by feel. Gene Schramp, the author, makes certain that surface drag of covering is downward.

Textile Operating Executives of Georgia take up . . .

- High-draft spinning
- Under-frame cleaners
- Automatic builder motions
- Metallized and chrome-plated top rolls
- Ball-bearing top rolls
- Nylon saddles and oilless cap bars
- Pneumatic roll pickers
- Plumbing antifriction spindles
- Converting to large warp bobbins
- Reducing "wild yarn" on spoolers
- Controlling sliver, roving, and yarn weights

Cleaning, Spinning, Controlling Problems Discussed By Georgia Men

HERE ARE ANSWERS to 12 questions on mill processes from opening through warp preparation as submitted by 34 Georgia mills. The answers were given at a recent meeting of the Textile Operating Executives of Georgia and are condensed and presented here for easy, fast reading.

High-Draft Spinning

Question: (a) Give your experience with the new high-draft spinning change-over using the newly designed cradle. What are the processes in your cardroom? Give total doublings, grain sliver, hank roving, and spinning drafts. State whether you use double or single roving.

(b) How does yarn spun on the high-draft spinning compare in total draft, evenness, and breaking strength with yarn spun on regular long-draft spinning?

Answers:

Mill S: (a) Our experience is limited on the new high-draft spinning changeover using the newly-designed cradle, since we have only one frame so equipped. To make comparison tests, we put three-fourths of one frame on these cradles and left the regular cradles on one-fourth of the frame. Processes in the cardroom are as follows: cards, breaker drawing, finished drawing, and Interdraft slubbers. Total doublings is 36, 57-gr. card sliver, 60-gr. drawing sliver, 0.90 hank roving. We spin 22s yarn from single roving with a draft of 24.4.

(b) Comparison tests of yarn from the above frame showed an increase of 3.7% in break factor and 9.7% decrease in variation with the new-type cradles.

Mill SS: We have not made any change-over to high-draft spinning, but have been running two sample frames, each of a different make.

On a number of laboratory tests made on 31s yarn spun from 1.0 hank roving, our records show the following:

No. 1 frame: 120-yd. skein, tensile constant 1832, yarn appearance: A—.

No. 2 frame: 120-yd. skein, tensile constant 1753, yarn appearance: A—.

Regular production: 120-yd. skein, tensile constant 1717, yarn appearance B+.

Our regular production is run from 3.50-hank double roving.

Under-Frame Cleaners

Question: What are the advantages of under-frame cleaners in spinning? What effect do they have on ends down, necessary cleaning time, traveler life, tape life, tape loading, quantity of gouts, and maintenance required? Can you show enough savings to justify the purchase of under-frame cleaners?

Answers:

Mill A: We have four units for trials that have been running for four months. We believe that the purchase price can be saved in two years on cleaning alone. We base this opinion on 3-mo. tests, which could be questioned on long-time operation.

Mill S: We have had six under-frame cleaners in operation on warp spinning for nearly a year. We average about 25% fewer ends down. We have made no change in the traveler-changing schedule, but could do so, as one of the features of the cleaner is that the travelers do not load up at all. We attribute the fewer ends down to this non-loading of travelers. We have to blow out and clean out the cleaners every 24 hr. This amounts to approximately 5-min. maintenance per cleaner per day. We blow off frames without cleaner every 2 hr. On the frames where we have the cleaner, we wipe off outside of the rail once in 8 hr. Special warps run from yarn spun on frames with the cleaner showed considerably less gouts in cloth than regular warps.

Mill GG: Advantages: cleaner frame and cleaner room, decreases week-end cleaning. We think number of ends down has decreased since the installation. Cleaning time has been materially reduced. We think the cleaner helps prevent traveler loading and thereby increases traveler life. Tape loading is decreased. Gouts were decreased. Some maintenance difficulties with the pilot model have been corrected.

Overhead cleaners reduced week-end cleanings by 60%. Under-frame cleaners reduced remaining cleaning by one-half.

Automatic Builder Motions

Question: Please give your experience with spinning-frame builder motions incorporating automatic features. State whether you are referring to the pneumatic type or the

mechanical type recently put out by a manufacturer of looms.

(b) Have they operated satisfactorily?

(c) Have the bobbins produced been more easily handled by the battery fillers? If so, how?

Answers:

Mill G: We are experimenting with one mechanical-type automatic beardown motion. So far it has not given us as good results as the pneumatic type. It is being used on coarse work.

Mill Q: (a) Automatic builder motions:

Pneumatic type: It has operated satisfactorily, but doffing is slightly more difficult than when the doffer bears down ring rail.

Mechanical type: Base to taper, 3.4 satisfactorily, but doffing is slightly more difficult than when the doffer bears down ring rail. This builder motion is complicated and requires much more attention from the fixer.

(b) By using these builder motions, a uniform build is made and the same number of wraps are placed on each bobbin.

(c) Handling time for battery hands. Time to put 100 bobbins in battery: pneumatic type, 8.79 min.; mechanical type, 8.81 min.; and regular, 9.18 min.

Wraps per bobbin after doffing.

Pneumatic type: Base to taper, 4.5; and taper to nose, 8.5.

Mechanical type: Base to taper, 3.4; and taper to bunch, 2.0.

Regular: base to taper, 4.7; and taper to nose, 22.8.

Mill S: (a) We have both pneumatic and mechanical-type rail control. Ends down on start-ups are left with the mechanical builder because the frame never stops until the rail is in doffing position, thus doing away with stopping at the top and starting again to pull down. The pneumatic control only stops the frame and lowers the rail into position for doffing.

(b) Yes.

(c) The bobbins produced by the mechanical builder are more easily handled by the battery filler. The bobbin has less end pull downs than one made with the conventional type. The short end at butt of quill is broken, the running end of the filling is pulled to the nose of the quill, and the quill placed in the battery hopper in one continuous motion.

Mill V: We have the type put out by a loom manufacturer. It is operating very satisfactorily to date. The battery hand can handle bobbins more easily, as there is not as much yarn to unwind from the bottom of the quill, and no bobbins are too full.

Mill W: We have one frame with the mechanical-type builder motion and cannot see where it is of very much advantage to us. It gets out of adjustment in a small way fairly easily. We can find no additional advantage to the battery filler because we have a mercury-limit-switch which stops the frame when it gets full, in conjunction with our regular builder.

SPINNING DISCUSSION was led by Z. Boyce Mangum, Supt., Sibley Div., Graniteville Co., Augusta.

Mill X: We have one No. 1 spinning builder motion (mechanical). We find it tends to provide a more uniform-size package and more yards to the package. Spinners do not have to watch the frame closely when it is nearly time to doff. The mechanical builder motion should enable battery fillers to handle more yarn since the bunch or wrap can be placed at the top of the quill.

Mill CC: We have one automatic builder of the mechanical type which operates with cams and is driven from the head end gearing of the frame. We first installed this builder on a frame of 3s filling. We attempted to run our bobbins without a bunch at the top, but could not get the rail to leave the top of the bobbin quickly enough to make a good bobbin. We then changed the builder to a frame of 11s filling and set it up to give us a bunch at the start and also one at the top of the full bobbin.

We could not get the rail down fast enough on this frame with the gears and cams that were on the builder. To correct this trouble, we speeded the drive of the builder about 100% and built up the pull-down cam in our shop until we got the rail to pull down with a maximum of 12 wraps from top to slacked-end position. This, of course, means that now the builder will put a bunch on the bottom, run the bobbin full, put a small bunch on the top of the bobbin, pull the frame when full, stop the frame with ends already slacked in doffing position, and wind the rack all by itself. All the doffer has to do is to doff and start the frame.

(b) Since we finally got our builder operating the way we wanted, we have had little or no trouble with it other than routine checking.

(c) We have no checks on the battery fillers using this yarn. However, we have been told by the weaveroom overseer that because all doffs are exactly the same size, the battery fillers like to use them.

Mill GG: We have one mechanical builder motion incorporating automatic features, specifically the mechanical type recently put out by a loom manufacturer, in operation. It has operated satisfactorily, and the bobbins are more easily handled by battery fillers because the end is easy to find and unwrap.

Keeping Rubber-Mounted Antifriction Spindles in Plumb

Question: Please give in detail your experience in keeping rubber-mounted antifriction spindles in plumb.

Answers: Two mills reported that they had been running rubber-mounted antifriction spindles for up to two years without trouble. One of these mills stated that the spindles had not been set since the frames were put in.

Other answers given are as follows:

Mill G: Three frames equipped. These are checked and plumbed by overhaulers at the regular intervals as with conventional spindles. It is necessary to use new rubber washers each time the spindle is plumbed. After the proper experience has been acquired, these spindles are easily handled by the spindle-plumbing crew.

Mill J: If you use the torque wrench that Saco-Lowell recommends and use the recommended amount of pressure, you will have very little trouble with spindles out of plumb. After our spindles have been installed, we go over them in a few weeks (after they have had time to settle), and replumb them. They then stay in plumb until the regularly scheduled overhauling.

If these spindles are plumbed with the frames stopped (per manufacturer's recommendation), after the tape is put on and the frame started up, the spindle will be pulled out by the weight on the tape. During plumbing, the spindle should be set to have a close setting to the outside of the ring, so that when the tape is put on the spindle it will pull the spindle into the true plumb.

Plugs for plumbing the spindle should be purchased from the company that makes the spindle. The po-

Summary of Methods of Controlling Weights and Variation

Mill	Laps		Card Sliver		Drawing Sliver	
	Frequency of Checking	Acceptable Variation	Frequency of Checking	Acceptable Variation	Frequency of Checking	Acceptable Variation
A		1.25%	Occasionally			
C					Finisher—drawing sliver only checked once every 8 hr.	3 gr. 55½ to 57 gr. sliver (Standard 55 gr.)
E			Daily		Daily	2% over or under
G		± ½ lb on 50 lb lap	Constantly			±1 gr. on 60 gr.-stock
H			Periodically		Periodically	
I						2½% on either side of standard for avg. of 6 sizings
L					Finisher sliver only once a day, one end from each delivery	±1 gr. per yd.
M	Daily—one lap from each picker on S-L tester				Daily—6 ends breaker and finishing	±1½ gr. from previous average
N						3% at first and second drawing
O					Twice each 24 hr., 1 yd. per delivery	3%
Q					Finisher only checked at time of block creel	±1 gr.
R	Daily—one lap from each picker on S-L tester				Daily—each delivery on both first and second drawing	Breaker: Standard: 56 gr. Upper limit: 57.3 gr. Lower limit: 54.7 gr. Finisher: Standard: 55 gr. Upper limit: 56.3 gr. Lower limit: 53.7 gr.
S	Every 2 weeks for coefficient of variation			6% from standard or minus 3 gr.	Weekly	Breaker: 3.5% from standard, or ±2 gr. Finisher: 2.5% from standard, or ±1.5 gr.
W	Every 2 weeks each picker checked on S-L lap meter	1.75% variation in total weight of lap (56.5 lb.). On lap-meter checks, 90% of yards to be within ± 2.5 oz.			Once a week	On 55 gr. sliver, 53.5 to 56 gr.
Y			Daily spot checks		Each delivery once per shift	±1 gr.
Z			Once each 24 hr.		Once each 24 hr.	± 3% both drawings
AA					Twice each 24 hr.	2 gr.
BB		97% of laps within 2/5 oz. variation	Once each shift—3 yd from each card	8%	Once each 24 hr.	8%
DD						
EE					Once daily	
FF					Daily	
HH						
II	Once a week yard-to-yard weight checked	1.2% coefficient of variation Lap length: ± 6 in., or 0.3% Lap weight: ± 1.5%	Periodically, but not daily		Periodically, but not daily	

Permitted in 23 Georgia Mills

Roving		Spinning Yarn	
Frequency of Checking	Acceptable Variation	Frequency of Checking	Acceptable Variation
Daily—5 bobbins from each of 4 frames	±2% (If ± 1% over 3 days, change made)	Daily—2 bobbins from each of 5 frames	
Once a week		Daily—8 bobbins from each number	
Daily	2% over or under		
Daily		Daily	
Daily	2% of weight of count	Daily	2% of weight of count
Periodically	2½% on either side of standard for avg. of 6 strings		2½% on either side of standard for avg. of 6 strings
Once every 2 days—one-half of room per day. Weighings made from 6 deliveries on each frame	± 0.01 hk.	Daily, both warp and filling	
Daily—8 bobbins from each hank of roving run	± 2 gr. from standard	Daily—8 bobbins from each number	± 5% from standard
	2%		2%
Twice each 24 hr., 4 to 20 bobbins, depending on number of frames on each hank. Once a week —4 to 8 bobbins from each frame	3%	Once each 24 hr.	± 3%
Daily control chart kept	0.50 hk.: ± .01 1.00 hk.: ± .02 2.00 hk.: ± .06 3.00 hk.: ± .06 4.00 hk.: ± .13 6.00 hk.: ± .13		3.0s: ± .05 11.3s: ± .15 20.8s: ± .30 27.5s: ± .40 47.0s: ± .60
Daily—4 bobbins from half the frames	Fly frames: per 12 yd. Standard: 87.7 gr. Upper limit: 90.5 gr. Lower limit: 85.0 gr.	Daily—bobbins from each single counts, 10 bobbins from each ply count	We do not use any weight limits on the single yarn but try to maintain as nearly as possible the standard number Weight and strength limits for ply yarns are as follows: Yarn number, weight in grains 60 yd., strength single strand: 9s/3 Upper limit: 114.0. None Standard: 111.0 5.7 lb. Lower limit: 108.0 5.4 lb. 10.50s/3 Upper limit: 95.6. None Standard: 93.0 5.3 lb. Lower limit: 90.3 5.0 lb.
Daily—8 bobbins from each hank of roving	2.6% from standard	Daily—8 bobbins from each number on each mix	3% from standard
Twice daily—8 bobbins of each hank roving	±2%	Twice daily on each count	4% light, 2% heavy for two consecutive days
Each frame once per shift	±2%	Once per shift: 12 samples from frame on each count	
Once each 24 hr.	± 3%	Once each 24 hr.	±3%
Once each 48 hr. (half the frames daily)	1 hk.	Half of frames daily	5%
Twice each shift	Roving spun into yarn. Variation less than one count		
Once daily		Once daily.	2 to 3%
Twice daily—20 bobbins from each stock and size roving frame. Operation repeated in afternoon, but only 10 bobbins taken		Daily — 10 bobbins weighed from each yarn count and model spinning frame	
Daily		Daily	
Daily		Daily	
Slubber: periodically, but not daily Final roving process: 15 to 25 bobbins of each hank sized daily			

sition at which the rail is set at top and bottom while plumbing is going on has a great deal to do with keeping the spindles in plumb.

Mill Q: We ran these spindles 4 mo. and then checked them. They were very badly out of plumb. The frame must be stopped to plumb the spindles, and special tools are required for the job.

Mill CC: We have 5,120 rubber-mounted spindles and are installing 5,120 more. These spindles have been put on with torque wrenches set at the correct inch-pounds, under the direction of an erector, are plumbed while stopped, and are checked while running.

After a few days running, a large number of these spindles are so far out of plumb that we can't run the ends. We reset the spindles only to have the same trouble occur again in a few days.

Our investigation points to the fact that doffers and spinners are not accustomed to this type spindle, and they pull the spindles out of line while doffing or spinning. This condition will probably clear up with training.

Controlling Sliver, Roving, and Yarn Weights

Question: Please describe in detail your method of controlling sliver, roving, and yarn weights. What are your acceptable variation standards at each process?

Answers: Methods of control and variations permitted are summarized in the accompanying chart.

Metallized and Chrome-Plated Top Rolls

Question: Do you rework your top rolls by metallizing or chrome-plating? If so, how do they compare with regular steel or cast-iron rolls as to (a) cost of rolls, (b) reduction in oiling periods, (c) wear on cap bars and saddles?

Answers: Nine mills reported that they reworked their top rolls by metallizing. (One reported that ends only are metallized).

No mills reported reworking rolls by chrome-plating.

One mill reported that they did not rework top rolls by either method.

Estimates of cost of metallizing as compared to purchase of new rolls varied from 35% less to 50% less. Two specific figures were given: 48¢ per roll and $1.20 per roll.

One mill reported that it used one less oiling per week on the metallized

roll. Three mills reported no change in oiling schedules. Other mills did not know or were still checking.

One mill reported less wear by metallized rolls on cap bars and saddles. Three mills reported no noticeable increased wear. Three mills either didn't know or were still checking.

Cleaning Openers and Pickers

Question: Give briefly your daily and weekly cleaning schedule on openers and pickers.

Answers: Schedules for cleaning openers and pickers are summarized in the accompanying chart.

Summary of Cleaning Schedules for Opening and Picking-- 23 Georgia Mills

Mill	4 times each 8 hr.	Twice each 8 hr.	Once each 8 hr.	Once each 24 hr.	Twice each week	Once each week	Weekends
B	Sweep floor in opener and picker room	**Openers:** Bale breakers Superior cleaners Centri-Air machines Lattice openers No. 11 Dust extractor Hopper feeders Vertical Superior cleaner Remove motes and fly	**Openers:** Pull chokes from screens and aprons Drop pan on rake distributor Blow off Centri-Air and lattice openers Pull sand boxes on hopper feeders and clean **Pickers:** Pull and blow off pickers Pick and clean screens and rolls Remove dust and fly Drop and clean pans on Optimizer			Opener room: Blow off and mop all machines Drop rake-distributor pans	
C			Pull all fly and chokes Drum belts			Run out stock, remove doors, open all hoppers and chutes, clean thoroughly with air, mop outside of picker	
D			**Openers:** Mop machines, clean out sand boxes, clean off magnets **Pickers:** Mop pickers Clean screens Clean synchronizer			**Openers:** Wash with mineral spirits **Pickers:** Wash with mineral spirits Clean sand boxes screens Pull chokes	
F		**Openers:** Centri-Air and lattice openers	**Openers:** Clean out under hopper feeders Blow off Centri-Air and lattice openers Clean out motes from pickers and gyrators Blow off all machines Run brush and clean screens	**Openers:** Blow down overhead Mop off hopper feeders, Centri-Air, and lattice openers Mop off No. 7 gyrators Remove chokes on apron shafts **Pickers:** Mop off all machines	**Openers:** Mop all machines Pick off all chokes on beaters, screens, condensers and fliers	**Openers:** Run out all machines Blow off grid bars Wash off chokes from shafts and grates Clean out condensers Mop all machines Put openers in machines ready for start-up	**Pickers:** Run out all machines Blow off grid bars Wash off chokes from shafts and grates Clean out condensers Mop all machines Put openers in machines ready for start-up
G			Clean out all machines, frames, screens, sand boxes, flues Check for chokes around screen, beaters, eveners, and feed rolls				
I				Mop off openers and pickers Clean cap bar bearings Remove all motes		Blow off pickers	
K		**Openers:** Mop machines **Pickers:** Mop machines	**Openers:** Pull chokes **Pickers:** Pull chokes Blow off machines				**Openers:** Pull chokes Blow off machines with cleaning tool **Pickers:** Pull choke Blow off machines with cleaning tool
L			**Openers:** Clean beater sections, air ducts, condenser sections **Pickers:** Clean screens	**Pickers:** Pull motes			
M			At beginning of shifts: Remove waste from sand boxes Clean screens, fan flues Mop, oil and blow off entire machine In middle of shifts: Mop pickers				Soap 2 hr. early, mop machines, remove waste, clean screens, raise hoods and clean beaters, screens, grids
N	Opening room: Sweep floors Picker room: Sweep floor (3 times in 8 hr.)	**Pickers:** Mop pickers Mop suction fan Inspect and clean flues	**Openers:** Clean out motes and fly Empty sand boxes Blow off equipment Pick chokes Clean cleaners Blow off machines			**Openers:** Clean sand boxes Blow off machines Mop all machines Remove all chokes Sweep entire room	

Ball-Bearing Top Rolls, Nylon Saddles, Oilless Cap Bars

Question: Give advantages and disadvantages, with effect on quality of yarn and ends down, by using: (a) ball-bearing or roller-bearing top rolls, (b) nylon top saddles, (c) nylon or metallic oilless top-roll cap bars.

O		Pull motes	Raise covers, pull chokes, blow off machines						
Q		Opener room: Sweep floor Pickers: Blow off machines Sweep floor	Openers: Pull motes Clean filter bags Blow off machines Pickers: Pull motes	Openers: Wipe off machines Pickers: Pull chokes Clean screens Wipe off machines	Pickers: Clean out side doors and sand boxes				
R			Openers and pickers: Pull motes Remove bags and collections from screens and grid bars Check dust chimney Feed rolls, clean from shafts, feed rolls, beaters Blow off and mop machines						
S			Openers: Blow off machines Pickers: Raise covers, remove chokes		Openers: Clean inside of blenders Pickers: Blow off machines		Openers: Clean out inside of machines Pickers: Wipe machines		
T	Opening room: Sweep floors, window facings, and walls Pull motes from vertical screens Pickers: Mop beater bonnets Clean top calender roll cleaner Pull calender rolls and remove chokes found	Openers: Blow off machines Pull motes	Openers: Mop machines (running) Pickers: Mop machines Clean chokes from aprons Clean condensers and screens Mop waste machine and waste hoppers	Openers: Clean chokes from aprons	Openers: Blow down ceiling Pickers: Blow out screens, grid bars, cutter bars Blow down overhead		Openers: Clean windows Clean lap trucks		
W			Openers: Pull motes	Openers: Clean flues, screens, aprons, air flues Pickers: Clean top screens and beaters (twice each 24 hr.) Pull motes, clean flues	Pickers: Clean return-air condensers		Pickers: Clean bottom screen Pull screen fly		
Y		Remove chokes Blow off machines					Mop machines		
Z		Mop openers and pickers Blow down ceiling Clean air motes Clean screens							
AA	Clean air machine	Clean vertical beater	Clean apron shafts Clean openers, picker screens, mote boxes, and aprons						
BB		Mop machines	Pull motes, clean chokes from flues, screens, and aprons Clean overhead condenser Pick chokes from Gyrator and aprons						
CC		Openers: Pull motes	Openers: Clean out under aprons Mop one-third of feeders, beaters, lattice, filter bags Pickers: Clean top screens Mop one-third of pickers Pull motes from Gyrator				Openers: Clean No. 6 fibers Pickers: Clean bottom screens Clean dust house		
FF			Beginning of each shift: Clean and oil each 45 mesh fan complete cleaning Blow off all machines, pull motes and fly Mop floors Pull motes and fly on lattice openers	Clean all aprons			Clean grid bars on F-7 cleaners		
II	Blow off openers and pickers (3 times each 8 hr.)		Mop openers and pickers Clean screen, grid bars, and dampers on pickers Clear chokes from aprons Pull motes from openers and pickers		Clean chokes from blending With fronds of pickers				

Answers:

Mill C: The ball-bearing rolls we have show about 5% less variation with an increase of about 3% in breaking strength. We get about 3% fewer ends down per thousand spindle hours.

Mill L: The effect of ball-bearing rolls on quality and ends down was an improvement while the rolls were new. However, after the rolls were buffed, they showed a loss in quality and increased ends down.

Mill N: We obtained reduced ends down with ball-bearing top rolls.

Mill Q: Of the ball- and roller-bearing top rolls tried, none was entirely satisfactory.

Mill T: A test comparing two frames with regular rolls with two frames with ball-bearing top rolls on the front rolls only shows a 7.1 decrease to date in ends down for the ball-bearing rolls. No significant difference has been found in yarn evenness or breaking strength.

(*Continued on page* 200)

Polyamide fibers (nylon)
Polyacrylic fibers (Orlon)
Polyester fibers (Dacron)

Here's the difference--

Nylon, Orlon acrylic fiber, and Dacron are different with respect to flexibility, resilience, and stiffness. These differences can be explained by the nature of the building units making up individual fiber molecules. To illustrate these differences in properties, we can draw an analogy to woven fabrics. In these hypothetical fabrics, the warp ends are the long-chain fiber molecules, and the filling picks are the forces that, for simplicity, we shall call electrical bonds between adjacent long-chain fiber molecules.

In the warp of our nylon hypothetical fabric, nylon molecules are light, flexible building blocks bound together at fairly long intervals by electrical bonds. So the "fabric" is flexible, soft, and elastic. The Orlon acrylic-fiber hypothetical fabric represents a configuration in which the molecules of Orlon are bound together at shorter intervals because of the initially smaller building blocks used to make Orlon polyacrylic fibers. This hypothetical fabric then has a greater number of picks and higher construction; so Orlon is fairly stiff and resilient.

The Dacron polyester fiber hypothetical fabric shows that building blocks of Dacron are comparatively heavy, stiff, and resilient, and they are bound together in about the same manner as nylon. The stiffness here is produced mainly by the larger cross-section of the individual molecules, which contain benzene rings, and makes the fiber resist bending and also permits more rapid recovery from bending. Stiffness and resilience are put to use in Dacron.

Here's the DACRON Story

► *Dacron (pronounced DAY-cron) was engineered as a fiber to produce resilient fabrics. Prime use will be in suitings*

► *Dacron in blends improves wrinkle resistance and dimensional stability*

► *Knitting yarns, continuous-filament fabrics, industrial fabrics, curtain fabrics, and sewing thread are other uses*

► *Problems to be overcome are pilling, static, melting, and garment-manufacturing procedures*

By DR. L. L. LARSON
Manager, Sales Development Section, Nylon Div., E. I. du Pont de Nemours & Co.

DISTINCTIVE FUNCTIONAL PROPERTIES of Dacron are high wet and dry resilience, dimensional stability under wet or dry conditions, high stretch resistance coupled with high strength, high bleach resistance, and high heat resistance. Market evaluations have demonstrated a wide variety of end uses where this new fiber is ready to improve the functional performance of fabrics and give the ultimate consumer more for his money in ease of care, freshness and neatness of appearance with continued wear, lower maintenance cost, and longer life.

Suitings Most Natural Use

The most natural outlet for Dacron polyester fiber appears to be in suitings and all types of outerwear. The contributions of Dacron to suitings are:

Excellent appearance: color, drape, tailoring qualities
Wrinkle resistance and press retention: wet, moist, or dry
Dimensional stability
Launderability without shrinkage or wrinkling
Economy

Based on a paper recently delivered before the American Assn. of Textile Technologists in New York.

APPEARANCE

It is fundamental that garments have aesthetic appeal. This appeal requires ability to be dyed to a complete range of attractive shades, good tailoring qualities, good draping properties, and satisfactory fabric texture. Suiting fabrics of Dacron meet these requirements.

RESILIENCE

Resilience is a keynote of a good suiting fabric. Resilience is the keynote of Dacron, just as resilience is the keynote of wool. There is a fundamental difference, however, between the resilience of the two fibers that is demonstrated by the ability of Dacron to maintain its high resilience in moist or wet conditions. Under dry conditions, Dacron polyester fiber and wool have essentially the same initial crease angle. We have found that this initial crease angle is a good indication of the liveliness of a fabric. At 90% r.h. the crease angle of Dacron is unchanged, while the wool fabric undergoing this test decreases significantly. Under wet conditions, the crease angle of Dacron remains essentially unchanged, whereas the crease angle of the wool fabric drops greatly.

High wrinkle resistance and press retention under wet as well as dry con-

The Link Between Dacron and Terylene

The groundwork for the development of Dacron was laid by the late Dr. W. H. Carothers, famed Du Pont research chemist, in his work with high polymers. Polyesters were among the first of the condensation polymers investigated by Carothers. Rather than continue with an exhaustive study of polyesters, he elected to devote the major portion of his efforts to polyamides—a course which resulted in the development of nylon.

British research chemists of Calico Printers Assn. Ltd., after studying the published works of Dr. Carothers, initiated a further study of polyesters. Their work led to the development of a polyester fiber now known in England as Terylene. Independently, Du Pont researchers had undertaken a search for other useful condensation polymers and expanded the early work of Carothers.

Shortly thereafter, Du Pont chemists learned about the researches of the British chemists and ultimately negotiated for the purchase of patent rights then owned by Calico Printers Assn. Ltd., specific to the polymer selected by them for development. This polymer, a condensation product of ethylene glycol and terephthalic acid, is the polymer from which Dacron polyester fiber is spun.

When Can You Get Dacron?

The Du Pont Co. is proceeding as rapidly as possible with the construction of a plant at Kinston, N. C., to manufacture Dacron polyester filament and staple. The annual capacity of the plant is to be rated at 10,000,000 lb. of continuous-filament yarn and 25,000,000 lb. of staple and tow. This plant is scheduled to be in operation in the spring of 1953, although this date is entirely dependent upon the procurement of materials. At the present time, a pilot plant at Seaford, Del., is supplying a significant poundage of yarn, staple, and tow for market evaluation by the textile industry.

ditions have a profound significance in actual wear. First of all, a suit of Dacron is unaffected (aside from getting wet) when a wearer is caught in a rainstorm. After drying, the suit of Dacron looks just as it did before it became wet and needs no pressing.

The ability of suits of Dacron to be worn in rain without wrinkling is meaningful, but the real value of high resilience under moist or wet conditions comes in humid weather. The performance last summer of suits of Dacron polyester fiber in comparison with representative tropical suits, both worsteds and rayons, shows a decided advantage for Dacron. Actually the controlled test of performance included 20 wearers, each of whom had a suit of Dacron polyester fiber and a control suit. In every case the suit of Dacron outperformed the control suit. All of the suits of Dacron were from a 7.8-oz per 54-in. yard fabric, while the control suits ranged from 9 to 11 oz. per 54-in. yard. The high strength of Dacron makes fabrics of lighter weights practical.

Resilience is fundamental in winter suits as well as in summer suits even though the effect is less dramatic during colder and dryer days of winter.

Other fabrics which have demonstrated outstanding wrinkle resistance in wear tests this past winter are coats made of a 12-oz. yarn-dyed fabric of Dacron which have been worn 15 days at a time without pressing. Another striking example is a gabardine topcoat of Dacron. The coat was worn all winter (about 100 days of wear including several times in the rain) without pressing. The coat was essentially free from wrinkles. A year-round suiting made on the woolen system that also showed good wrinkle resistance and crease retention was made from a fiber blend of 60% Dacron and 40% wool.

The wearers of these suits were comfortable last winter, and rated them essentially the same in warmth as other suits of comparable weight and construction.

DIMENSIONAL STABILITY

Manufacturers of summer suits have been seeking a solution to the problem of puckering and fabric movement that is caused by subjecting garments to high humidities, and also puckers and shrinkage that occur at times in cleaning operations. Dacron polyester fiber promises to be a practical solution to these problems of dimensional stability in wearing and in cleaning.

Three coats tested show the influence of changes in relative humidity on fabrics of 100% Dacron, 50% Dacron–50% wool, and 100% wool. The three coats were subjected to a humidity change from 65% r.h. at 70° F. to 90% r.h. at 75° F. At the high humidities, the coat of Dacron polyester fiber was unwrinkled, the coat of a 50-50 blend was only slightly wrinkled, and the wool coat was wrinkled. The wrinkles remained in the coat until removed by a pressing operation. In this test, the fabric of Dacron moved very little (within experimental error), the wool fabric selected for this test moved almost 1%, and the fabric of a blend of Dacron and the same grade of wool moved about 0.5%. These data explain the actual conditions.

WASHABILITY AND CLEANABILITY

Fabrics of Dacron are not only stable to changes in relative humidity, but they are also stable to washing as well as to dry cleaning. Our laboratory tests showed a 7.8-oz. tropical of Dacron shrank less than 1% when washed 8 times at 140° F.

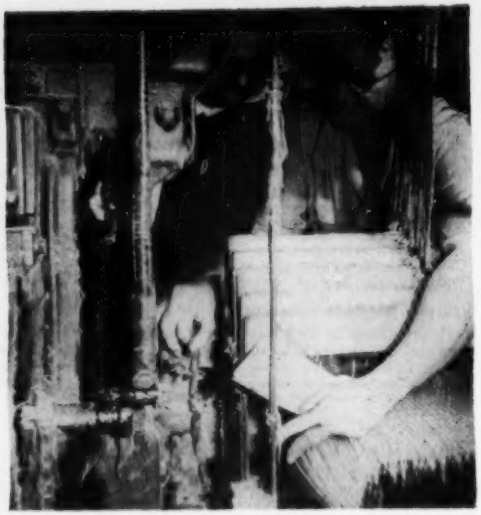
A suit of Dacron, called the "swimming-pool suit," points the way to washable slacks and even washable suits of Dacron. This suit received 67 days of wear last summer. The owner did not press it until it was cleaned and pressed to put away for the winter. The owner had to keep it clean of course, so he went swimming in it twice and at 32 days of wear he had it washed in a home washing machine. Without pressing, the owner continued to wear the suit daily as a business suit. It is suggested that a suit made for washing should incorporate sewing thread and bindings of Dacron.

ECONOMY

Properties of high wrinkle resistance under wet as well as dry conditions, ability to keep a sharp crease almost indefinitely, dimensional stability under the varying conditions of wear, washability, easy spot removal, and the good strength and abrasion resistance of Dacron polyester fiber add up to economy to the owner. From the data given under abrasion re-

(Continued on page 312)

1 *INSPECT A FEW LOOMS on each section each shift. Have a good loom man do the job, and don't check more looms than the fixers can adjust or repair during the shift. The author, Frank Cantrell, right, is shown as he checks a loom with Worth Womick,* second-shift overseer.



2 *CHECK CRANK ARMS to be sure that they are tight, as Mr. Womick and George Earl, loomfixer, are doing here. Also, keep the swords tight on the rocker shaft. Jam nuts should not be used on these setscrews because they pull the setscrews away from the rocker shafts.*

For Maximum Production . . .

Keep Your LOOMS *in Top Condition*

▶ *Here's how a first-class weave-room man keeps his looms in best possible running condition. Key points of the program are good inspection, good fixing, and good oiling.*

By FRANK E. CANTRELL

General Overseer of Weaving, Haynes Plant, Cliffside Mills, Inc.

TODAY, IT IS IMPORTANT both to our companies and to our national security that we get the most out of our machine parts and that we keep looms running at maximum efficiency.

Therefore, I try to keep my looms in top condition and have a program of "fixing for maximum production." The major points of my program are shown and described in the pictures and captions. Here are a few other pointers.

The overseers do our loom inspecting. They check all the vital parts of the loom as a routine part of their job. They fill out two copies of an inspection form for each loom. They give one copy to the loomfixer and keep the other copy to use when they recheck. We have the loomfixers thoroughly check each loom when the warp is out. Many parts and motions are easier to check and replace with the warp out.

An experienced oiler is one of the greatest assets a weave room can have. I contend that the oiler should be a loom man. A trustworthy and experienced oiler can be the cheapest man on the payroll from the point of view of service rendered.

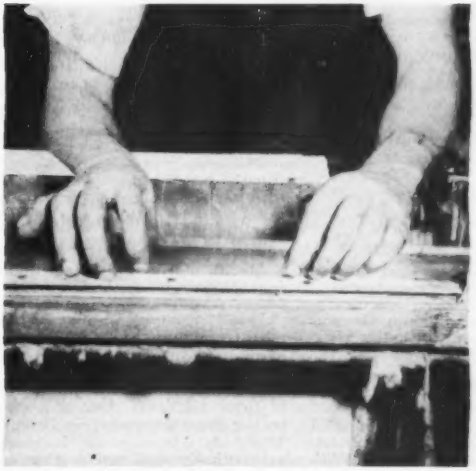
An oiler should know how important oil is and about how much oil each part needs. Of course, a correct oiling schedule is needed; but in addition, overseers should be sure that oilers put the oil in the oil holes. Many times they miss, the oil is wasted, and the parts suffer.

In addition to the operating-cost benefits a mill gets from good loom-fixing, quality is improved. Seconds from wavy cloth drop if take-up gears and studs are in good condition. Good picking, timing, and boxing cut the number of mispicks. And, of course, weavers generally do a better job if their looms are running right.

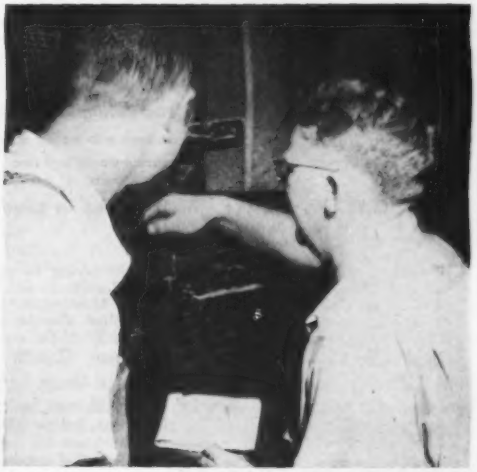
3. KEEP THE LUGSTRAP HOLDERS as high as possible. This way, you use the least amount of power and reduce wear on all parts of the loom. The warp runs better, too. Also, check the parallel blocks. If they are worn, you can't parallel the pickers.

4. CHECK THE STROKE and set to manufacturer's specification. Don't continue to use worn pickers. Check to see that the loom is picking at the correct place on time.

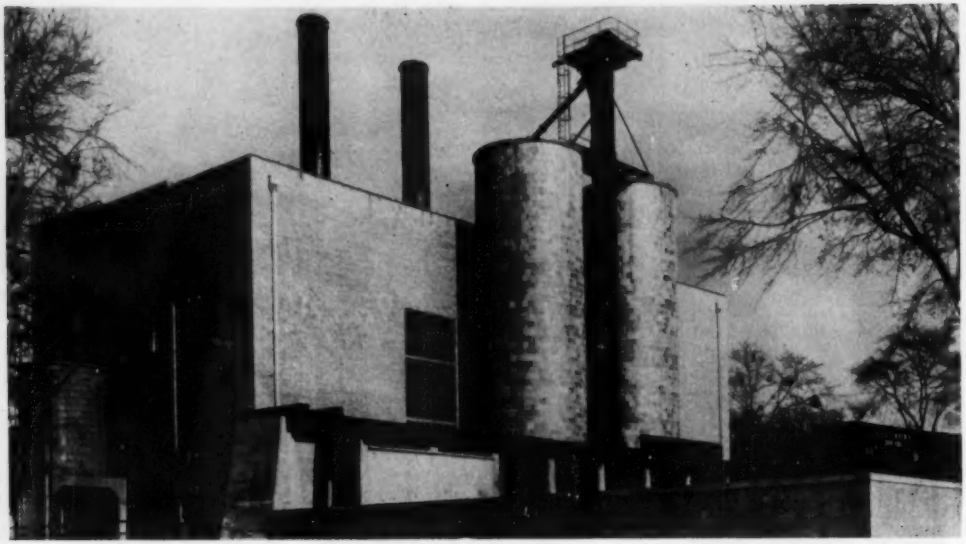
5. KEEP ALL BOLTS TIGHT. Examine pick-cam toes and replace if worn. Check pick balls for good running condition and for wear. If these parts are worn, you will get a weak pick.



6. CHECK LAY ENDS for alignment with the race plate. Be sure that all bolts that hold the lay end to the lay are tight. Square the reed with the race plate, and check the reed groove for wear. If the groove is worn too much, the reed will be loose in the center, and the shuttle will be hard to box.



7. HAVE THE INSPECTOR, or overseer if he does the job, recheck the looms to be sure that the work has been done, as Worth Womick is doing here with the loomfixer. Get the loomfixer to mark the fixing order "completed" when he has finished so that the overseer can check the loom. Follow-up insures success of the program.



TWIN GLAZED-TILE SILOS at rear of plant can each hold 300 tons of coal in dead storage and 50 tons ready for immediate use. The 25-ton-capacity ash silo at extreme left receives crushed clinkers and ash from a pneumatic pipe conveyor that services two coal-burning boilers.

Coal-Fired STEAM-GENERATING PLANT Is Clean and Efficient

At the Stevens plant, Graniteville Co., Graniteville, S. C. . . . .

- ***All operations are as automatic as possible***
- ***Top efficiency is maintained even during load swings***
- ***Pneumatic ash handling and an ash-silo water spray keep dust down***
- ***Over-all operating and maintenance costs are low***

By E. DALTON WHITE, *McGraw-Hill Atlanta Bureau*

CAREFUL SELECTION of equipment and liberal use of automatic devices are proving of great value in the clean, high-efficiency operation of the Stevens steam-generating plant of Graniteville Co., Graniteville, S. C. A. P. Stevens, chief engineer in charge of company power facilities, acted as both consultant and designer for the boiler plant, which was completed several years ago.

Beginning with coal delivery from a railroad siding at the plant and continuing to final disposal of ash, all operations are as automatic as possible. This automatic set-up has resulted in saving in manpower and unusual cleanliness throughout the plant.

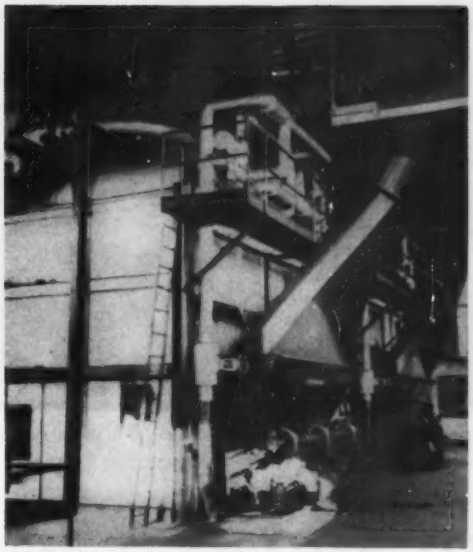
Heating and processing steam is supplied also to nearby South Carolina mills of the company, including Hickman, Granite, Woodhead, and the new Gregg dyeing and finishing plant. Sufficient boiler capacity has been installed to allow for the addition of turbines for the generation of electric power if conditions warrant it. With power-generating equipment, steam would be extracted from the turbines for use in heating and mill processing.

Because of an anticipated high rate of production at the new $10,000,000 Gregg plant [TW, March, '51, p. 120], a new 100,000-lb. boiler is being installed at Graniteville that will use fuel oil, and later natural gas. This boiler is designed to operate at 86% efficiency.

The original plant installation consisted of two Keeler-Duplex four-drum bent-tube boilers equipped with furnace waterwalls and rated at 500 psi., 750° F., and 80,000 lb. per hr. Firing is done by nine-retort link-grate underfeed Westinghouse stokers with a 180-sq. ft. projected grate area.

While operating at 200-psi. saturated pressure, the plant has had maximum loads of up to 3,800,000 lb. of steam per day, with an average of about 3,200,000. During a 24-hr. period, steam demand varies 20,000 to 30,000 lb. However, the boilers are automatically regulated so that controls adjust boiler operations in a manner that maintains high efficiency during load swings.

This automatic device includes both a steam-pressure-actuated master unit



PASSAGE OF COAL is from the outside silos, over vibrating weigh scales, and down into the stoker. Combustion control regulates the stoker delivery speed.

MOTOR-DRIVEN CRUSHER travels from boiler to boiler as needed. The close clearance between it and the ash-hopper disposal port makes dust negligible.

that varies stoker speed and an induced-draft fan damper that controls combustion. A furnace pressure-balance regulator controls the forced-draft fan damper. A master regulator initiates load-change adjustments to both boilers, which operate in parallel. So well has this automatic system worked that daily load charts and log sheets reveal that variation in load balance between the two boilers has been consistently within 1% of total load.

Ash Disposal

The system of automatic controls is also effectively applied to raw-material handling, namely coal movement, and to ash disposal. The latter is of special interest in that the pneumatic system has worked very effectively and has maintained a marked degree of cleanliness.

Ash collects in hoppers fitted with roller gates. Through the gates, ash is discharged into a traveling crusher before it enters the pneumatic pipe conveyor that takes it to the ash silo. The motor-propelled crusher is located under the boiler, and ash and clinkers discharge through the crusher into the conveyor system. A slight negative pressure in the furnace and the suction of the pipe conveyor keep dirt and dust from scattering over the floor.

At the discharge end, a water spray settles the dust as it enters the 25-ton-capacity ash silo. Steam used in this siphon system amounts to about 200 lb. per ton of ash. A trap door in the silo allows ash to be dropped into trucks. From here it is carried to a distant ash dump or is used around the plant roads and grounds.

A Beaumont Birch pneumatic ash-handling system conveys the dry ash, fly ash, soot, and dust through the pipe until they reach the steam exhauster mounted on top of the silo. The suction in the pipe keeps any dust from getting into the plant and thus is another factor in the maintenance of plant cleanliness.

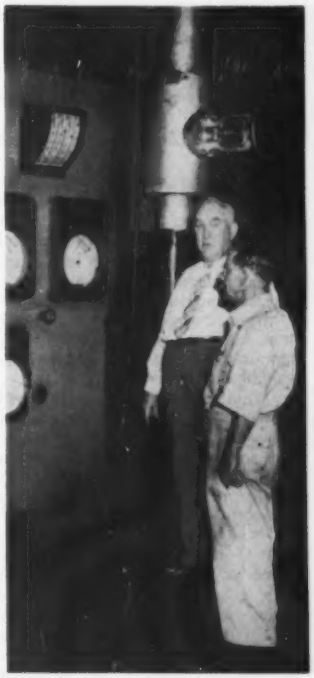
Coal Handling

Coal handling is also automatic. From rail cars, coal is unloaded to outside storage or into a vibrating hopper under the track. It is then taken by bucket elevator to either of two storage silos. Each of these consists of 300-tons capacity for dead storage and 50-tons capacity for live storage.

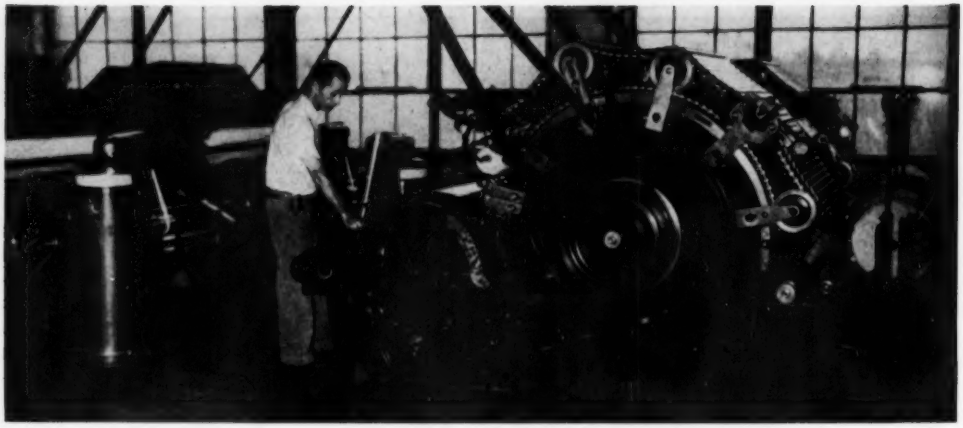
Fuel can be fed back to the elevator and transferred to live storage at the top of the reinforced glazed-tile silos. From here, the coal flows by gravity to individual 200-lb. vibrating scales before it enters the non-segregating chute that supplies each boiler unit.

The Beaumont Birch coal-handling system used in feeding back is a centrifugal-discharge bucket-elevator system.

(Continued on page 193)



CHIEF ENGINEER A. P. STEVENS (left), who designed the plant, likes to check the over-all efficiency at regular intervals.



DEPARTMENT HEAD'S DAILY INSPECTION is a key step in preventive maintenance. It should be systematically arranged so that all machines are examined within a reasonable period of time.

Keep CARD ROOMS Running

HIGHLIGHTS: *Real maintenance is the prevention as well as the repair of breakdowns—Correct selection and proper application of lubricant helps reduce machine stoppage and wear—Regular routine machine inspection will detect many faults of machine condition and adjustments—Proper cleaning and waste-removal schedules are important in machine maintenance.*

By E. H. HELLIWELL, *New England Editor, TEXTILE WORLD*

MACHINERY-MAINTENANCE programs in mills should have as their main objective the prevention of the failure or breakdown. If prevention is achieved, it will save the loss of machine production, reduce the cost of replacement parts, preserve the uniform quality and quantity of production, lessen the work and improve the morale of the machine operator, and lengthen the machine life.

Genuine maintenance starts with the installation of new machinery. The department head's inspection before acceptance of any newly installed machinery should be thorough and exacting. Incorrect adjustments, speeds, or alignments will cause future trouble and will require early replacement of parts. Sufficient time should be allowed for the breaking-in period, running without stock, and noting any undue vibration, overheating, or other abnormal running conditions. When stock is run through, the quality and quantity of product should be closely checked, and tolerances for variations should meet all purchase specifications.

Keep a Record Of Speeds and Settings

When correct settings and speeds have been established, these should be recorded and checked at reasonable intervals. Monthly checks of all machine speeds have proven practical and valuable in many card rooms. Forms are furnished with machine numbers, and sufficient machines are checked each day to cover the entire room in one month. A variation from standard speeds requires correction of the faulty condition and a re-check.

Any variation in the appearance or quality of the product from any machine calls for a complete examination of all settings and adjustments on that machine. The department head's daily routine examination should be arranged to cover all machines within a reasonable period of time. The length of the period will depend on the size of the department, but it must be done systematically and not at random if preventative maintenance is to be effective.

Complete and detailed instructions should be given to all persons concerned with the operation, care, or repair of each machine.

It is well known that many machine failures are caused by improper operation, and these failures can be prevented by instructing workers on the correct way of running and caring for the machine. A follow-up should then be made to see that these instructions are carried out.

Proper Lubrication Is Important

Insufficient or improper lubrication accounts for more machine failures than any other one cause. The establishment of correct lubrication schedules and a thorough check on their efficient execution are the most important parts of any effective machinery-maintenance program.

The machine-builder's recommendations can be safely followed as to oils of the correct viscosities and grease of the right consistency to use on each type of bearing, as well as the frequency of application.

An over-complicated schedule that calls for a great variety of different oils and greases can be avoided. It is sufficiently difficult to get the correct application of one oil without increasing the difficulty with a large number of different lubricants. Consultation with lubrication engineers of oil suppliers will often result in a simplification of lubrication schedules and more efficient lubrication of all card-room machinery.

Principles of GOOD CARD MAINTENANCE

▶ No general detailed rules can be given to cover maintenance on all types of machines. There are certain basic principles that must be followed if future machine failures and machine stoppages for repairs are to be kept to a minimum. The most important of these principles are listed at the right.

- Proper installation of machines with all specifications fully met as to speeds and quantity of output.
- Constant check for correct adjustments and speeds.
- Detailed instructions to operators on care and operation.
- Complete lubrication schedules, with a check on their proper execution.
- Routine cleaning and waste removal, with posted schedules for each type of machine.
- Periodical scouring, with complete check of parts.
- Systematic inspections, including daily, weekly, and complete inspection when machines are scoured.
- Regular and complete overhaul of machines. The time between overhauls will vary with different types of machines.
- Detection of causes of breakdowns and their correction.
- Adequate supply of replacement parts and repair facilities.
- Well-trained, conscientious machine fixers.
- Records of part failure and replacements on each machine.
- Thorough check on fit, quality, and life of parts replaced.
- Co-operation and close contact between operating department, repair shop, and supply department.

With Organized Maintenance

Proper instruction of machine oilers is an important part of all lubrication schedules. All machine-part failures caused by improper lubrication should be called to the attention of the oiler and a report made to the department head. This method permits a check to be made on lubricant used and method of application.

Cleaning, Scouring, and Waste Removal

Routine cleaning and waste-removal schedules should be posted and rigidly enforced. These schedules are an important part of all maintenance programs. Accumulations of waste are the cause of many breakdowns and of a large amount of poor-quality work. A clean machine produces more material of better quality. Many yarn imperfections can be traced to clearer, fly, and oily waste from poorly cleaned machines in the card room. Instructions should be given workers on each operation as to the proper time and method for cleaning and waste removal

Periodical scouring, if carefully done, will do much to prevent machine breakdowns. This scouring should be done systematically and thoroughly. Rolls are removed, bearings and oil passages cleaned, new lubricant applied, gears cleaned, and all adjustments carefully checked when parts are replaced. The best practical plan is to arrange scouring schedules to include a sufficient number of machines each week to cover all machines within a certain specified period. Six months is the generally adopted period for card-room machinery on two-shift operation.

Inspection of all parts can be made while the machine is being scoured. Detailed inspection forms should be used. Notation should be made of condition and a record made of part repair or replacements. This inspection is a valuable check on the faithful execution of cleaning and lubrication schedules and correct adjustment of all parts, as well as a great aid in preventing future machine failures.

Regular Complete Overhaul Necessary

A complete strip-down overhaul should be done at regular intervals. This interval varies in different mills and on different classes of machines. The following periods are considered good practice on two- and three-shift operation: all picker machinery every two years, cards and drawing every five years, combers and auxiliary machinery every year, slubbers and roving frames every three years. This overhaul is in addition to the regular scouring and inspection schedules.

The complete overhaul includes the checking and recording on prepared forms of full details on the condition and replacements of all worn parts. All machines are leveled and lined and all parts reset. When the overhaul is properly done, the machine should be as good as new in every respect and should assure satisfactory service.

Replacement-Parts Supply

An adequate supply of replacement parts is an absolute necessity to keep machine repair stoppage down to a minimum. Close cooperation between the department head and parts-supply department is essential if the required part is to be on hand when needed. The department head is more familiar with the probable part requirements for each type of machine in his department. It should be his responsibility to see that any part likely to be needed is ordered for the stock room. His order should include all necessary details for ordering from the supplier, with the number to order and the minimum number to be kept on hand. The stock department should order the number stated when the specified minimum order point is reached.

Many mills have found it profitable in the long run to buy all replacement parts direct from the machine builders rather than make them in their own machine shops. The machine builders are better equipped for this work and also have better control of the quality of material and uniformity of workmanship. This method does not lessen in any way the value of a well-organized repair shop in the mill for making many emergency repairs.

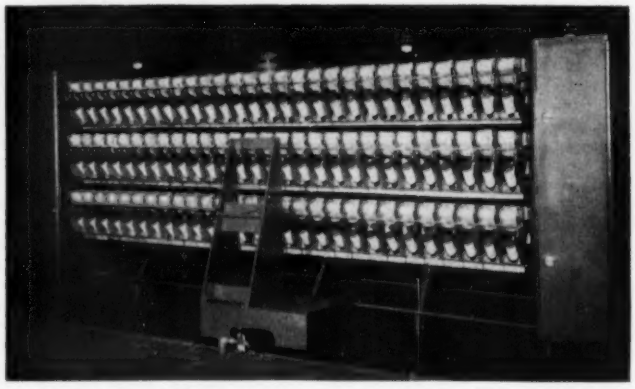
With such a program, machine failures can be prevented and kept running at top efficiency.

Knitting Machines

▶ U. S. Textile Machine Co., 411 Gilligan St., Scranton, Pa., demonstrated a 168-spindle triple-deck uptwister. Standard size will be 300 spindles.

The uptwister has three banks of supply and take-up spindles. The supply spindles are mounted at a 45° angle to save machine height, and the take-up spindles are horizontal. Standard spacings between spindles and standard spools are used. The take-up spindles have flexible cores to accommodate take-up bobbins or tubes.

Each side of the frame has a twist and cam control so that different yarns can be run simultaneously on the two sides. Each spindle has an automatic stop motion that stops the spindles (supply and take-up) when a yarn end breaks or a supply spool of yarn runs out.



THIS TRIPLE-DECK UPTWISTER, shown by U. S. Textile Machine Co., takes standard supply spools and either bobbin or tube take-up cores. The 168-spindle model runs 15,500 rpm., is driven by a Westinghouse vertical 10-hp. motor, and is equipped with sealed ball bearings.

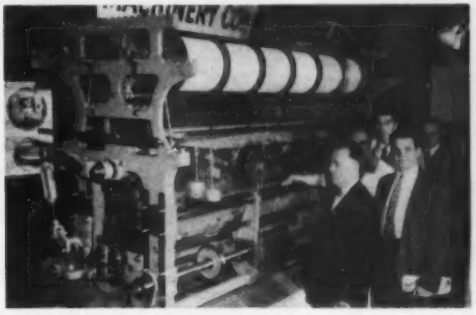
At Atlantic City...

New Machines and Auxiliaries Spark KNITTING SHOW

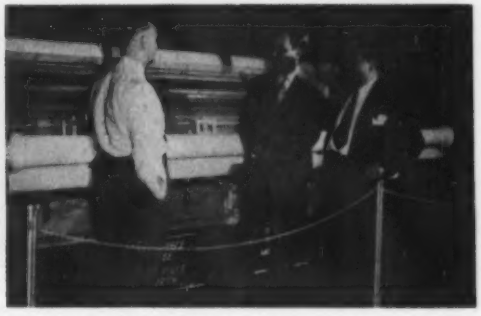
HIGHLIGHTS: Triple-deck uptwister — Raschel-tricot-type machine — New knitting machines for Army socks — Many mending devices — New motor drives for smoother starting and stopping

Improved machines and methods—with emphasis on Government work—highlighted the 1951 Knitting Arts Exposition in Atlantic City.

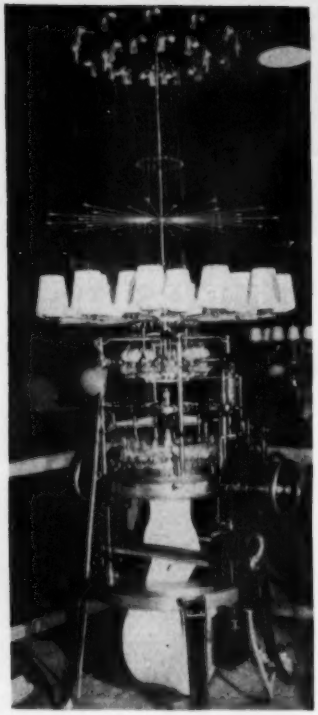
Concise descriptions of outstanding new developments that were shown for the first time are presented here.



WARP KNITTER of the raschel-tricot type was shown for the first time by Premier Textile Machinery Co., Inc., 440 Mercer St., Jersey City 6, N. J. Samuel Huffman, vice-president, stands by his machine with technician Buck Hatu and salesman Mel Collins. The new machine incorporates the speed and gauge features of tricot with the guide-bar and needle advantages of the raschel. The knitter can produce solid, mesh, and net fabrics. Speeds are 200 to 400 courses per min., and a range of 6 to 24 needles per in. is possible.



THE NEW KIDDE-AVECO high-speed tricot machine was shown by Kidde Mfg. Co., Inc., Bloomfield, N. J. This two-bar, 168-in. machine will accommodate beams with 21-in. flanges. It is equipped with a variable-speed drive, jogging control, quick stop, continuous let-down, continuous take-up, a tachometer, and a two-shift rack counter. Shown at the machine are (left to right) C. Glover, Kidde Mfg. Co.; Jose F. Gonzales, American Viscose Corp.; and Antonio Arce, Hilaturas Habana S. A., Havana, Cuba.

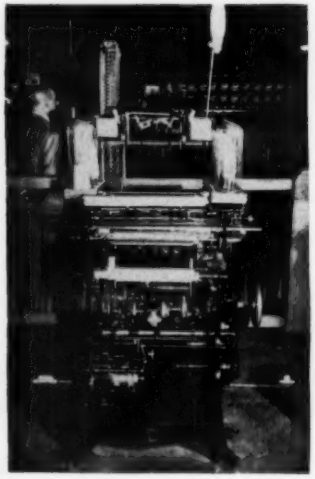


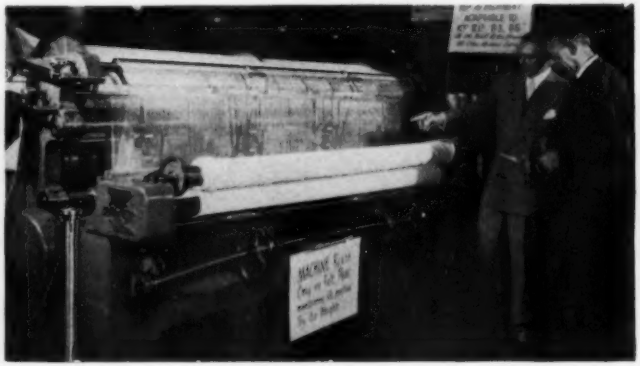
UNDERWEAR FABRIC of many types can be knitted on the Wildman Mfg. Co. new 24-feed rib machine. At 23 rpm. of the cylinder, the machine produces about 30 yd. of fabric per hr.

THE 54-GAUGE FULL-FASHIONED hosiery machine of Wildman Mfg. Co., Astor & Elm Sts., Norristown, Pa., has 13 new features. They are:

1. Two-speed V-belt drive that knits 50 courses at low speed and 100 courses at high speed.
2. An automatic welt turner that takes every needle instead of every other needle.
3. Carrier-band support rods to permit the use of looser carrier bands and to decrease band breakage.
4. A split-sole attachment for knitting black-heel stockings.
5. A loopless-toe attachment.
6. An expanding-ring-type clutch in the driver for smoother operation.
7. A size-changer control that speeds up the changing of stocking sizes.
8. A yarn-control finger that throws splicing yarn out of the way of needles to prevent needle breakage.
9. A back-racking control that makes it possible to back rack at any position of the machine.
10. A narrowing device to permit narrowing on every course.
11. A double catch bar that gives individual control over sinkers and dividers.
12. A needle-bar-yoke end-thrust bearing to hold the needle bar in proper alignment.
13. A knock-over-bit aligning frame to hold the knock-over bar in alignment.

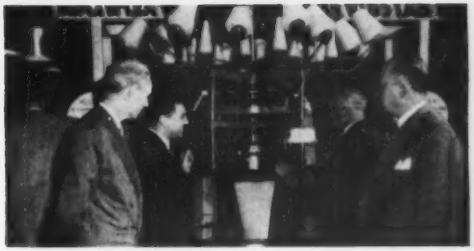
MODEL-SR RIB-CLOTH knitting machine shown for the first time by Supreme Knitting Machine Co., Brooklyn, N. Y., is so constructed at the dial and cylinder sections that there is only a single set of dial cams to change when conversion from plain to Swiss rib is desired. No template is required for realignment purposes to get the dial cam back into knitting position. The dial section removed here shows the individual mounting of the extra-thick dial stitch cams and the separate mounting of the dial-raising cams. The cylinder section is similarly constructed. Other features of the SR machine are sizes from 7 in. to 30 in., 1½ feeds per in. of diameter chosen, about 50 yd. production per hr. at 100% efficiency with 18/1 yarn at 28 stitches per in., and constant lint-blowing systems at the dial-cam raceway and from the dial drive gear that blow only while the machine is in motion.



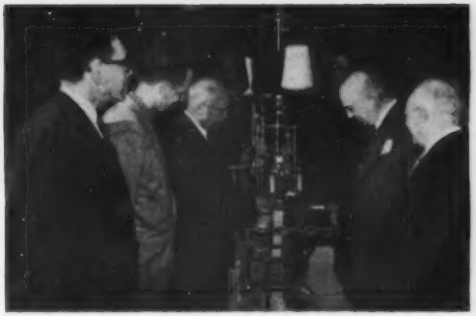


A HIGH-SPEED TRICOT MACHINE manufactured by Karl Mayer Co., American Zone, Germany, was shown by Alfred Hofmann & Co., 635 - 59th St., West New York, N. J. The 84-in. machine shown ran at 740 courses per min. and was not bolted down or leveled. The frame of the machine rested on felt pads. The machine will be available in 168-in. width and will accommodate 21-in. beams. For plain fabrics, it will run at 600 to 650 courses per min. It will be available with two or three bars and a cut presser-pattern bar. A 168-in. 2-bar machine, 28 gauge, will sell for $9,500, F.O.B. New York City. With three bars and a cut presser-pattern bar, the same machine will cost $12,050 F.O.B. New York. C. A. Hepp (left) and Peter Schoenster, president and secretary of the company respectively, are shown as they discuss the machine during the show.

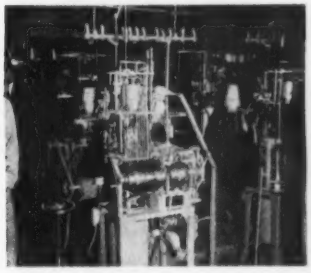
A HYDRAULIC COMPENSATING DEVICE that provides constant linear feed and maintains uniform tension has been developed for model-C2 tricot machines by Whitin Machine Works, Whitinsville, Mass. The device is said to eliminate shade marks and give improved cloth quality. A. W. Eichelberger, left, superintendent, A-Q Mills, Timmonsville, S. C., is shown as he discusses dial settings with R. F. Waters, manager, Knitting and Winding Div., Whitin Machine Works. The two dials at the left control feed, and the dial at the right controls take-up.



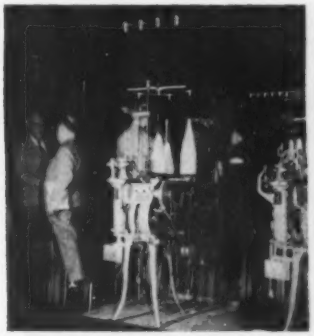
A REVOLVING-CYLINDER rib-body machine named Multiplex, with a positive-electric magnetic clutch working in conjunction with an individual motor drive, was shown by H. Brinton Co., Kensington Ave. and M St., Philadelphia, Pa. Photographed as they discuss the machine are, left to right, Joseph Olachea, H. Brinton Co.; Herman Schachner, Schachner y Pollok Ltd., Santiago, Chile; H. W. Anderson, vice president, H. Brinton Co.; and Enrique Enrich, manufacturers' representative, Havana, Cuba. A magnetic clutch involves a self-contained panel for current conversion and permits practically instantaneous function of all stop-motion facilities.



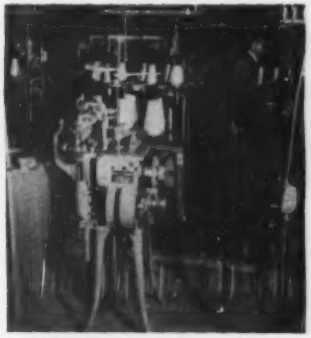
A COARSE-GAUGE MACHINE designed for the manufacture of comfort socks with 32 steps in the pattern was shown by H. Brinton Co. This machine, model Anglo, permits an almost unlimited range of color and pattern. Mr. Anderson (third from left), is shown as he explains the operation of the machine to a group of knitting-mill men.



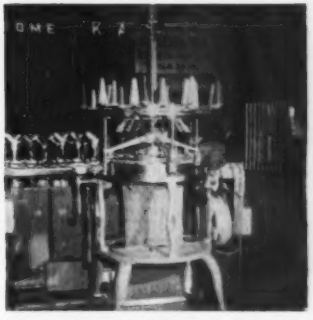
A SMALL-DIAMETER LINKS-AND-LINKS machine was shown by Scott & Williams, Inc., 350 Fifth Ave., New York 1, N. Y. A new press-off draw-thread mechanism knits stockings so that they can be separated by pulling a single thread. This feature is said to increase operator productivity. A new finger at the second feed of the double-feed machine permits the use of different weights and colors of yarn in the foot and top of the hose without production loss.



ARMY SKI SOCKS are made on the Scott & Williams new "right-angle ski-sock" machine. The right angle is a special heel gore that extends into the instep. The machine drops each sock and so eliminates the usual separation of socks. The model shown was 10-gauge, 5-in.-diameter, 60-needle.

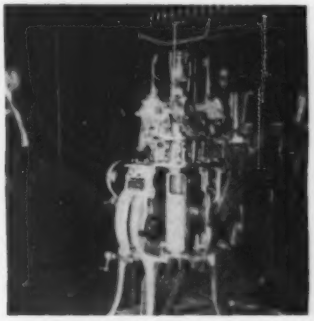


A TRUE RIB AND A PLAIN-KNIT LEG are made in one operation on the Scott & William ETR (Economy True Rib) machine. Top-quality ribbing is said to be knitted at a saving in time and expense. The machine and a range of hose for men, women, children, and infants produced on it were displayed.

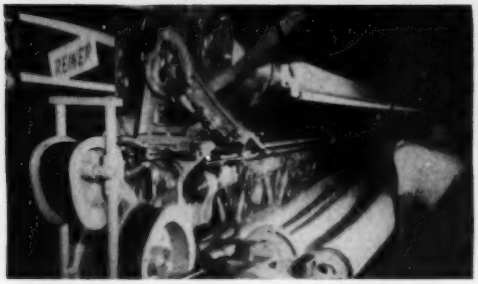


AN INTERLOCK machine for outerwear that interlocks two layers of ribbed fabric was operating in the Scott & Williams booth. Fabric knitted on the machine is said to stretch well and return to its original shape. The knitting of sports clothing for men, women, and children is particularly adaptable to this machine.

A FANCY BALBRIGGAN EYELET knitting machine was shown by Scott & Williams. Both single and double eyelets, individually or in combination, are knitted by the machine. Patterns can be changed by the disks without retiming. The 18-in. model will produce about 36 yd. of 3½-oz. fabric per hr. with 18s yarn.

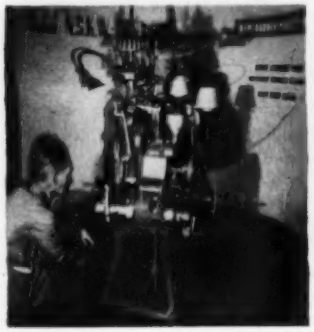


A MULTICOLOR-PATTERN INLAY (MPI) machine that uses facer feeds, each of which can take care of one inlay figure, was shown by Scott & Williams, Inc., and created a good deal of interest. In leg knitting, all four feeds are in continuous action. In heel and toe knitting, two feeds are in continuous action.



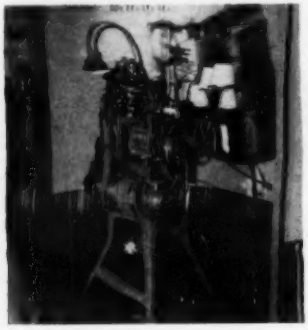
168-IN. THREE-BAR TRICOT machine was exhibited by Robert Reiner, Inc. This latest model has a positive take-up gear running from the main cam shaft instead of a weighted take-up with a counterbalanced dancer roll. The machine has an automatic electric needle-down stop for operator convenience when an end breaks. Newly designed pattern-chain links can be taken apart and rearranged for other patterns. The pattern drum can also take pattern wheels for standard 2-bar work. The machine, using split cams, was running 350 courses per min. on 3-bar 15-den. nylon blouse and trimming fabric. Other features of the tricot machine include split cams for high-speed 2-bar work, a Bijur continuous centralized controlled-lubrication system, and a Westinghouse copper-oxide rectifier for applying d.c. current to the a.c. motor for quick stopping.

LATEST TWIN KNITTER exhibited by Robert Reiner, Inc., and serviced by Albert Merbeth, erector, was running on 60-gauge work. Improvements added to this model are a lever attachment for gauge marking, a larger needle-bar shaft, a reinforced presser-arm shaft and presser arms, three presser arms instead of two, a thicker and stronger coulier arm that gives more lead for the carriers, a coulier cam made of hardened steel, a split cam shaft near the right end of machine for easier replacement, a clutch guard, and a silent chain drive instead of a gear drive. The Twin Knitter was running 78 courses per min., a four-course-per-min. increase over earlier models. The machine has a loopless-toe attachment that cuts out the whole looper operation. Safety switches and stops are included at several points in the knitting procedure and mechanism.



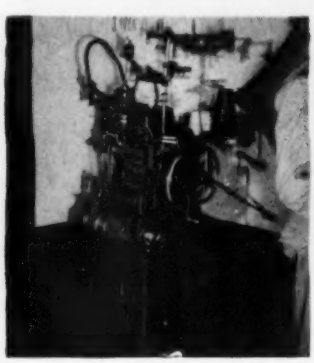
A 19-STEP machine for men's plaited fine-gauge half-hose with wrap patterns was shown by Hemphill Co., P. O. Box 580, Pawtucket, R. I. Plaiting, without flash or vertical stripes, is produced on this machine.

AN OVERPLAID machine that turns out 2½ to 3 doz. pairs of argyles with overplaid per 8-hr. shift was shown by Hemphill Co. This machine is a 4-in., 12-gauge, 108-needle knitter.

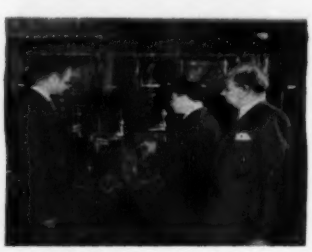


A RIB-TOP CUSHION-SOLE SOCK is knitted on this Hemphill Co. machine in men's sizes from 9 through 13. The 4-in., 108-needle, automatic-transfer machine can produce about 5 doz. pr. per 8 hr. in two colors.

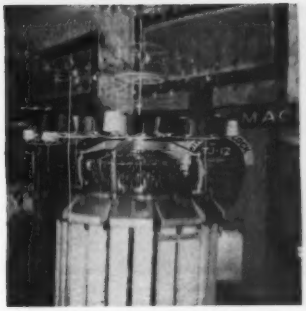
A NEW 84-NEEDLE ARGYLE machine, similar to the 108-needle machine pictured in the center of this page, was also shown by Hemphill Co.



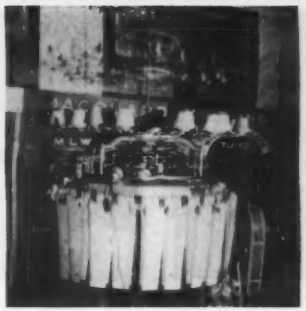
CHILDREN'S ANKLETS from size 4 to 9 are knitted on this Hemphill Co. 3-in. cylinder machine. The anklets have a true-rib top. Transferring is automatic.



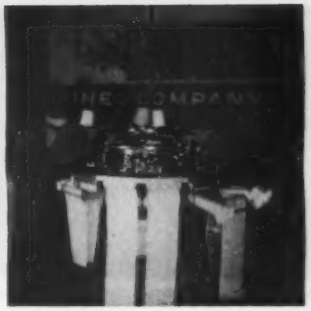
A NEW CONE WINDER, the Vario-Coner was shown by American Schweiter Co., Whitinsville, Mass. H. J. Theiler, president, (left) is shown as he demonstrates the stop-motion to Eli Steinberg, Eli Steinberg Co., (center) and I. Cohen, president, Manhattan Sweater Co., Inc. The machine can be operated at a speed of about 250 yd. per min. from skeins to cones and 400 to 450 yd. per min. when backwinding. A stop motion stops the individual head when the yarns tangle.



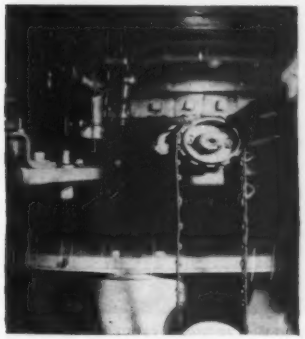
MODEL TJ-12, a circular jacquard transfer machine, was shown by Jacquard Knitting Machine Co., Philadelphia 24, Pa. This 30-in. machine is equipped with 12 knitting feeds and 8 transfer systems. Four-color yarn changers and a two-speed drive are used.



12 OF THE 24 FEEDS of this model-MLW machine are fitted with automats for jacquard designs. This 28-in. model has twelve 4-color yarn changers that are automatically controlled. The machine was shown Jacquard Knitting Machine Co.

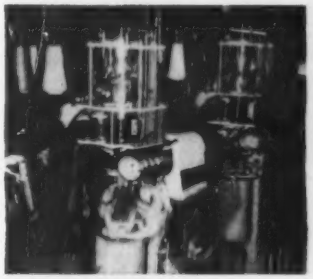


A FULLY AUTOMATIC 12-feed machine, model TA-12, displayed by Jacquard Knitting Machine Co., has free-operating dial needles and can be equipped with 4-color yarn changers. The 30-in. machine is also available with an interlock mechanism.



THREE THREAD STRIPERS and automatic pattern-changing equipment are featured on the model S-1 single-head spring-needle machine manufactured by Tompkins Bros. Co., Syracuse, N. Y. The pattern-changing equipment is pointed out in the picture. The thread stripers are located at the upper left. The machine has a visual-signal electric stop motion and cylinder lighting. It is available in cylinder sizes from 24 to 35 in. and gauges from 5 to 50.

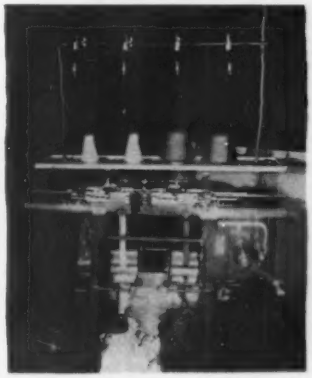
► Every other feed of the Model B-17 latch-needle machine made and shown by Tompkins Bros. Co. interlaces with the following pair of feeds. The machine can have from 21 to 52 feeds, according to cylinder size, which can vary from 12 to 24 in. Gauges range from 18 to 42.



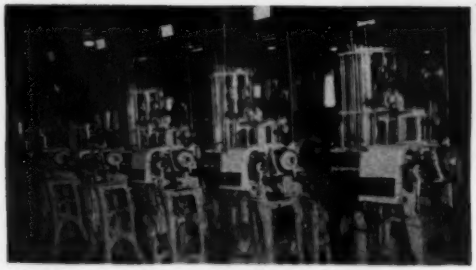
STEPPED V-BELT PULLEYS provide a range of speeds for this double-head spring-needle knitting machine, manufactured by Tompkins Bros. Co. It features an electric control panel, electric stop motions, and a new clutch and brake assembly. It is available in cylinder sizes from 8 to 35 in. and gauges 5 to 50.

► A 15-min. 16-mm. sound film explaining the technical highlights of the new Karl Lieberknecht 60-gauge full-fashioned-hosiery machine was the main attraction in that company's booth. The film laid stress on new features of the machine, including high-speed operation on 32 sections (80 courses average per min.), the new welt wire laying-in device, a new stitch and loop-size regulator, the mitre-heel and lace-border attachment, the automatic weight-take-up device, and the double narrowing spindles for 60-gauge manufacturing.

FOR THE OUTERWEAR TRADE, this model TEAM exhibited by Edmos Products Corp., 13 Christopher Ave., Brooklyn 12, N. Y. uses a welt- and tuck-cam arrangement to give patterns. Two sets of needles—single- and double-butt—give selectivity. This model can make plain- or fancy-ribbed-body fabrics and is said to be quickly changed from one to the other. Edmos also announced a new method of adjusting the stitch on all machines by rotating a calibrated nut. Springless tension devices are also now available on all models

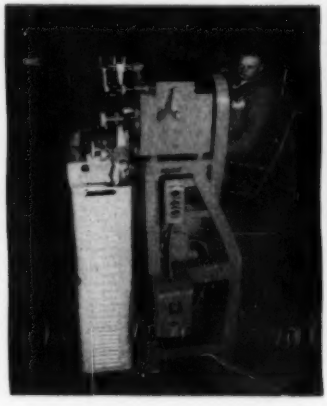


THIS TWIN-HEAD BORDER MACHINE, made by American Knitting Machine Co., 118 Boerum St., Brooklyn 6, N. Y., features a selective rack over three needles. Micrometer stitch control and ball-bearing shafts are also listed as advantages.



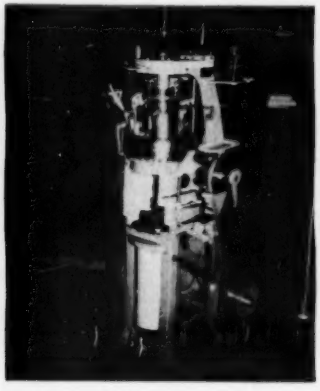
BENTLEY KNITTING MACHINERY ORGANIZATION, INC., Providence, R. I., exhibited 25 knitting machines. Included in the group were 13 Komets, 3 automatic swift machines for circular hosiery, and 9 machines for outerwear and underwear.

THREE MODELS of jacquard rib machines (Komet JL) were the newest machines shown by the Bentley Knitting Machinery Organization, Inc. Gauges were 9, 12, and 15. The machines are equipped for double-feed, drawthread, and five-feed striping. They are used for knitting rib fabric in leg and instep and plain knitting in the sole.

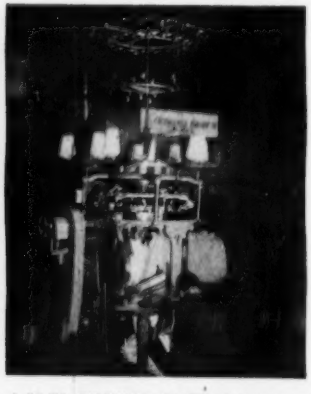


FIBER IN TOW FORM is crimped at the rate of 320 ft. per min. by the new crimping machine demonstrated by Turbo Machine Co., Lansdale, Pa. Crimping pressure can be graduated from 200 to 1,800 lb.

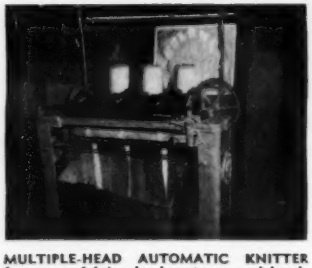
Turbo also showed its Airdryer, now equipped with a fan to create a vacuum. The older model used steam jets. Quicker drying and steam saving are the advantages gained, Turbo said.



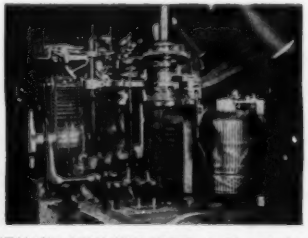
MORRIS SPEIZMAN CO., INC., 508 West Fifth St., Charlotte, N. C., distributor, displayed the new Apex knitter manufactured by A. Kirkland & Co. Ltd., in England. The machine is available in sizes and gauges from 3¼-in., 200-needle, to 4½-in., 84-needle.



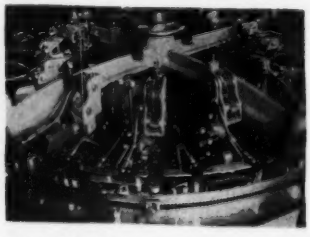
A 30-IN. CIRCULAR KNITTING MACHINE was shown by Ordnance Gauge Co., Amber and Hagert Sts., Philadelphia 25, Pa. The fully automatic machine, model OTS, produces fine-gauge jersey bodies with knitted-on 2x2, 2x1, or 1x1 bottom with cotton separation.



MULTIPLE-HEAD AUTOMATIC KNITTER for narrow fabrics, borders, tapes, and bandings was shown by Ainslie Knitting Machine Co., Inc., Brooklyn 11, N. Y. This high-speed machine comes in 3- or 4-section models up to 18-cut and can make fabrics from ¼ to 2½ in. in width.

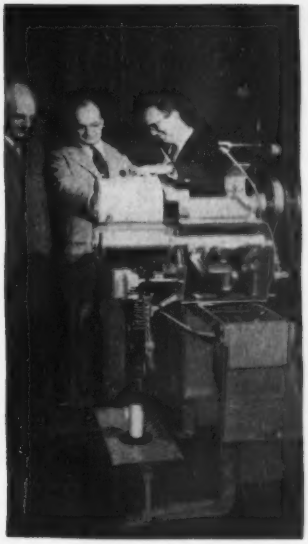


ITALIAN LINK-AND-LINKS double-cylinder circular knitting machine with jacquard attachment was exhibited by San Giorgio Societa Industriale Per Azioni of Genoa, Italy, through Select Trading Co., Inc., New York, N. Y. The above view is of a 3½-in.-diameter machine with 198 needles, in the equivalent of an American 48 gauge. Jacquard-motion mechanism is at the right. The machine can knit inter-linked and striped fabrics, according to the pattern chosen. Production runs about 40 pr. in 8 hr.



MULTIPLE-FEED TRANSFER machine that can produce 32 bodies per hour was the latest development featured by Leighton Machine Co., Manchester, N. H. Operating at approximately 16 rpm., the new 12-feed, 30-in. push-button-controlled machine can make 2x2, 2x1, or 1x1 cuffs transferred to a shaker-stitch body.

Other features of the unit include a two-three, or four finger striping on each feed; and hardened plates and cylinders.

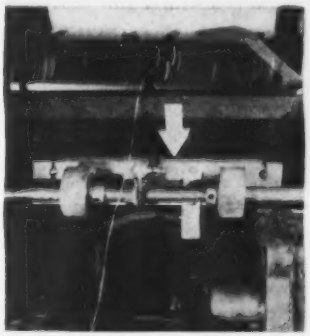


► **An improved lock system** for their tandem-carriage, links-and-links knitting machine was shown by Queens Machine Co., 280 Starr St., Brooklyn 27, N. Y. The machine, which features cable and rope stitches with no missing needles, also now has a new jacquard-turning system.

MODEL-78 PRECISE-WIND WINDER, featuring a guide traverse up to 10 in. for large-size cones or tubes, was on display at the booth of Foster Machine Co., Westfield, Mass. The unit, similar to a 5-spindle winder shown at Atlantic City last year, is being discussed by C. B. Terry (left) and E. C. Connor (right) of the machinery firm, with Dr. E. S. Kennedy of Textile Research Dept., American Viscose Corp. Besides a V-belt adjustable-speed drive, the unit features slow starting and stopping, a direct oscillating-cam traverse-guide drive, a yarn-break stop motion, an electrical predetermined-sized package knock-off, and over-end drawing from bobbins or spools. Up to 14-in.-diameter packages can be wound at an average speed of about 400 yd. per min., depending on the yarn.

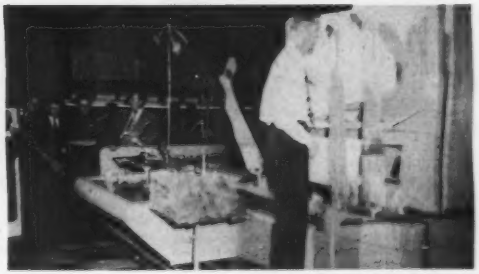
SIX- AND SEVEN-IN.-DIAMETER cylinders in the new model-S49 line of Multi-Design ribbers were the object of interest around the Fidelity Machine Co. booth. Designed for true rib fabrics for the outerwear trade—in the collar and cuff, waist, and headwear field—the large-diameter ribbers can be run with any kind of knitting yarn and can be furnished in any cut desired. H. I. Green, vice president of the machinery firm, points out the multi-design mechanism to Fred Crouch, superintendent of knitting, P. H. Hanes Knitting Co., Winston-Salem, N. C. Three patterns can be set on the machine at one time. Changes are made by merely changing pattern chains. An automatic electric stop motion is provided.

IMPROVED YARN-CONDITIONING applicator made of nylon felt covered with a cotton mesh, set up on a Universal Winding Co. "Roto-Coner" for the application of Hygrolit-Surco yarn-conditioning solution to yarns being wound, was shown by Kearny Mfg. Co. Inc., 681 Schyler Ave., Kearny N. J. The yarn-conditioning unit has a control switch at the end of the frame that regulates the number of contacts and amount of solution per minute put against the driving roll and onto the yarn.



SIDE CREASES that speed the transferring and seaming of slipper socks are made by these drying forms shown by Philadelphia Metal Drying Form Co., 4550 Torresdale Ave., Philadelphia, Pa. Time is saved because the usual center crease does not have to be pulled out.

TRAY DRYER for nylon hosiery that uses air circulation was shown by Charles S. Tiers of Proctor & Schwartz, Inc., Hosiery Div., to W. E. Schmank and W. L. Ruhe of NoMend Hosiery, Inc., Philadelphia plant. The tray dryer eliminates the boarding process. Hosiery is placed on the trays in four piles of one-half dozen pairs each. While drying is taking place on one shelf, finished hosiery is removed from the other and replaced with wet work. No skilled operator is needed.



SINGLE-OPERATOR automatic boarding, drying, stripping, piling, and counting machine for nylon hosiery was demonstrated by Proctor & Schwartz, Inc., Philadelphia, Pa., in an actual production run by Bucks Hosiery Finishers, Inc. Alvin Hemmerle is operating the unit. The machine speed can be regulated to the operator and adjusted easily to produce 2 to 25 doz. pr. of nylon hosiery per hour.

BOARDING OPERATORS do not have to open and close the door of Paramount Textile Machine Co.'s cabinets equipped with the new door-turning mechanism. The operator pushes a button and the door goes through a three-step action: (1) the door is opened by a cam, (2) it is revolved 180° by a sprocket and chain, and (3) it is closed again, with its outside and inside faces reversed. Production is increased by freeing the operator for the time spent in manually operating the door. Boarding forms used with this installation have grooves along the edge where the hosiery seam goes. The grooves hold the seam in place during heating and drying.

A PRESETTING MACHINE that sets and dries nylon hosiery in 20 min. was shown by Paramount Textile Machinery Co., 131 S. Wabash Ave., Chicago 3, Ill. At the back of the machine are exhaust parts through which air is driven out of the machine by steam that enters the heat-setting cabinet. Stockings are set at the temperature of the steam.

PRINTING ON HOSIERY WELTS appears to be fast and easy with the model-27A printing machine shown by Markem Machine Co., Keene, N. H. Speed of the machine is adjustable to suit the operator.

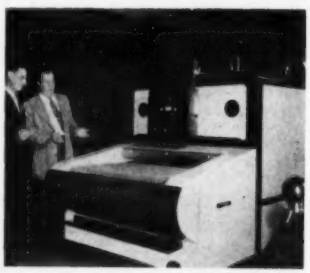
SMALLER, COMPLETELY AUTOMATIC hosiery-presetting box shown by Lydon Brothers, Inc., Zabriskie St., Hackensack, N. J., has over-all dimensions of 4½x2x7 ft. and inside dimensions of 28x18x56 in. J. P. McBride, factory representative, demonstrates the capacity of the machine. Other features of the new smaller-model conditioner include stainless steel-construction inside and of the front and door panels; 300° F. dry-bulb capacity; 20 to 100% r.h. possibilities; and protective devices like low-water cut-off, excess-temperature cut-off, and electric heater cut-off if the fan is not working. The unit is available as all-electric, all-steam, or combination steam-electric. A recording temperature control is included.

THREE-GROUP PREBOARDER developed by Maurice Heliot of Troyes (Aube), France, and built by Proctor & Schwartz, Inc., is discussed by Bernard A. Plesser, sales engineer (left), and George Lyerly, Jr., of Lyerly Full-Fashioned Mills, Hickory, N. C. The unit contains a total of 90 boards, is powered by a mechanical cam drive, and is operated by two employees working together, stripping and boarding. The boarding operator with her foot moves the boarding groups into succeeding positions when she is ready. At $6,700 complete, the Heliot machine costs approximately 20% less than the two Proctor preboarders needed for equivalent production of 30 to 36 doz. pr. per hr.

▶ A new "V" groove running along the foot and heel portion of a new type of board shown by Proctor & Schwartz, Inc., is designed for precise matching of stockings with patterned reinforced foot and heel. The seam is laid in the groove. At the top of the heel, the "V" groove blends into an offset edge so that the stocking seam can be blended slightly off the edge of the form and thus give a perfectly flat lay-out along the body of the stocking.

▶ **Steaming and calendering** of tubular knit goods for relaxation shrinkage was demonstrated by pictures and sketches at the booth of Tubular Textile Machinery Corp., 33-61 54th Street, Woodside, L. I., N. Y. It is said that shrinkage with this equipment is reduced by as much as 75%.

▶ A **steam-operated hosiery-conditioning** cabinet similar to its electric model, designed for mills with high electric-power costs, was on display at the Backus Machine Works booth. With a 40 to 44 doz. storage capacity, the cabinet can condition approximately 300 doz. stockings per 8-hr. shift.



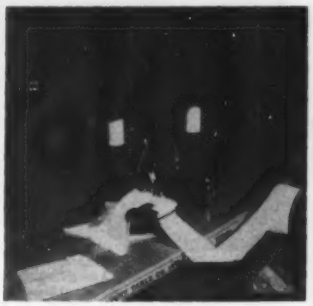
"THIS CONVEYOR-TYPE DRYING CABINET will eliminate a lot of labor," says Al March of Smith, Drum and Co., to Harry Spatz, sales manager, Geigy Co., "because three girls can do the work normally done by about fourteen girls."

The machine is designed for use on all nylon stockings. Advantages claimed by the manufacturer are (1) elimination of forms for drying, thus avoiding damage that normally occurs during the final boarding; (2) less floor space required for equivalent production; and (3) a resultant desirable dull finish. Berkshire Knitted Mills is reported to have processed over 5,000,000 pr. of stockings on one of these dryers over a six-to-eight-month period.

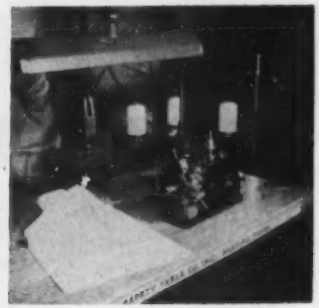
Mending, Sewing, and Trimming Equipment

► **A suction thread trimmer** easily installed on any convenient work table was shown by David Maimim & Co., 633 Arch Street, Philadelphia 6, Pa. The blades in the head clip threads without damaging the fabric, and a suction tube removes them.

► **A hand-manipulated pull-thread** mending machine that runs by electricity and eliminates the use of needles in repairing pulled threads was on demonstration at the booth of Stanford Marley Distributing Co., Inc., 505 Fifth Ave., New York 17, N. Y. Known as the "Miracle" machine, the mender is offered for sale at $205, complete, with a year's guarantee.



DECORATIVE LACE is attached to the bottom of nylon gowns and slips with a two-thread rolled seam on this machine that was shown by Merrow Machine Co., 28 Laurel St., Hartford 6, Conn. Lace with a straight selvage edge is used; no lace cutting on the machine is necessary. The rolled seam leaves no edges showing.



A NEW FEEDING ARRANGEMENT for side-seaming nylon and rayon tricot gowns and slips was demonstrated on this machine by Merrow Machine Co.

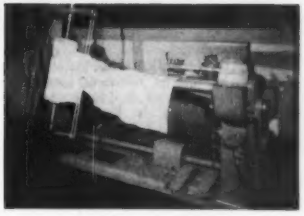
The manufacturer said that this machine is able to lay out a seam with no rippling or drawing up of the fabric and to run at a favorable production rate.

THE "CLIP-MATIC" THREAD TRIMMER made by Cutting Room Appliances Corp., 45 West 25th Street, New York 10, N. Y., is equipped with a thread-cutting head attached to a suction tube. As the blades of the head clip the loose threads on a piece of cloth, the suction tube carries them to a condenser box located at the right.

ARGYLE LOOPS are split by the scissors end of this device, and the resulting float yarns are trimmed by the clipper head. Trimmed yarn is carried away through the suction tube.

Ginsberg Machine Co., Inc., 224 Fifth Ave., New York 1, N. Y., distributors of the unit, say that cutting and trimming production can be increased by as much as 20 doz. pr. of hosiery per day.

PULLED THREADS in hosiery are mended rapidly by this electric mender shown by Marvel Specialty Co., Paducah, Ky. Twelve small wire points extend outward from the rim of the mender. As the mender revolves electrically, these points are passed down the pulled-thread defect. Loop tension of the fabric at the pulled thread is relaxed so that the space where the thread was pulled is filled in.

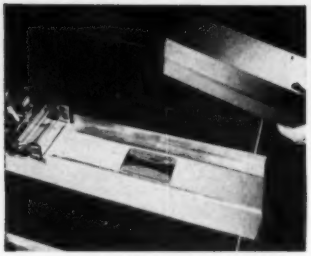


STRIPS OF TUBULAR-KNIT GOODS are cut straight and without waste on the collarette cutter shown by Utica Novelty & Mill Specialty Co., 2145 Dwyer Ave., Utica 2, N. Y. A new feature of the cutter is the base and revolving cloth-roll holder that make the machine a complete unit. As the knives cut the fabric, the roll holder turns to keep the slack in the cloth from being twisted during the cutting process.

A DOUBLE-NEEDLE, NEEDLE-FEED lockstitch machine, style 62200A-16, was shown by Union Special Machine Co., 400 North Franklin Street, Chicago, Ill. The machine, shown being operated by Jack LeTourneur, is the first needle-feed lockstitch machine made by Union Special. It has an operation speed of 4,000 stitches per min., totally enclosed tensions, a semi-automatic lubrication system, and a stitch range from 6 stitches per in. to as short as desired.

HOSIERY MENDING by controlled heat is done by the A.E.O. hosiery-mending iron demonstrated by Eric Burger, 5929 N. Mascher St., Philadelphia 20, Pa. It is not necessary to dampen the defective hose before heat application. Heat intensity can be varied for different yarn sizes.

Laying-Up and Packaging Machinery



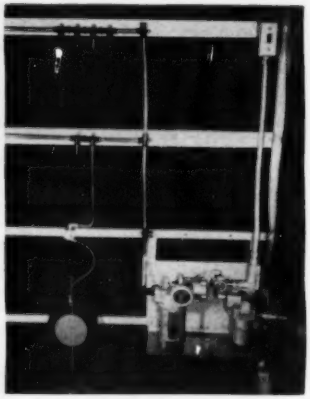
HOSIERY BOXES are printed rapidly and easily on this box printer shown by Morris Speizman Co. The stamping unit is at the end of the holder. The hosiery box is placed in the holder and pushed against the unit.

A FULLY AUTOMATIC LAYING-UP MACHINE was shown by J. A. Firsching & Son, 421-423 Broad Street, Utica 2, N. Y. The machine has a quick change gear variable speed that is said to eliminate all slippage and guessing on adjustment. A different gear for each kind of cloth is furnished to assure positive drive for smooth running. Shown as they discussed the machine are Edward Lundberg, Joe Barry, and Walter Korder, all of Whitney Chain Company; and L. W. Bender, J. A. Firsching & Son.

FOLDING, CONVEYING, pressing and packing operations in the knit-goods underwear trade are reduced to a continuous operation with the Amco conveyor press, manufactured by American Safety Table Co., Inc., 224 Fifth Avenue, New York, N. Y. Maximino Alvarez, Antilla Yarn and Supply Co., S. A., Havana, Cuba, Cuban representative for this machine, points out some of its features to Jose Pazos Paz, president, Redes Textil Co., S. A., Guanaboca, Cuba. The machine has positive heat regulation and a variable-speed drive.

Auxiliary Devices

TWO-PIECE FIBER BINDING PINS exhibited by National Vulcanized Fibre Co., Maryland Ave., Wilmington, Del., are explained to "Luke" Thomason of *Textile World* by J. S. Tatnall, company technical sales representative at the booth. The red-headed pins have a high density (1.40 specific gravity). The head is cut from fiber tubing and is put on over the solid-rod pin body in such a way that it takes 300 lb. to pull the head off. The two-piece construction gives a lower cost per pin than a single-piece machined pin.



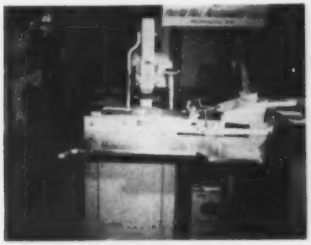
OIL-MIST, an automatic lubrication system, was exhibited by Alemite, a division of Stewart-Warner Corp., 1826 Diversey Parkway, Chicago 14, Ill. The system features low pressures—5 to 20 lb. of air—and has no moving parts. Because of the low pressures, piping fittings are nylon and are press-fit. Installations are therefore said to be both quick and easy.

GREATLY ENLARGED MODEL of the new Dura Safety carrier tube was made by the manufacturer, Ernest A. Feustel, Inc., N. J. State Highway No. 17, Lodi, N. J., to show the workable tip. The tip of this tube will break off on contact and prevent damage to sinkers and sinker heads if the catch bar jumps, friction slips, or if the sinkers get ahead of the carrier tube for other reasons.

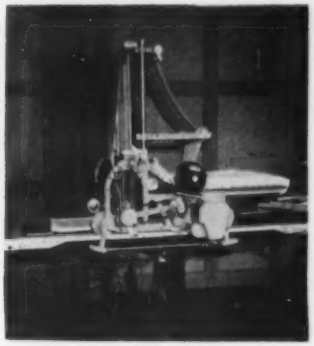
► **Aluminum hosiery-carrying trays** were exhibited by Specialty Products Co., 190 Warren St., Jersey City, N. J. The trays are suede-covered and are designed to hold twelve dozen stockings. These trays are said to give more efficient production, less handling and fewer seconds.

► **Fluorescent lighting fixtures** with openings in the top of the reflector were announced by The Miller Co., Meriden, Conn. The new fixtures allow 10% of the light to go upward and thus reduce the contrast between brightly lighted working areas and a shadowed ceiling.

AUTOMATIC WRAPPING of woven and knitted goods is done on this machine shown by Hayssen Mfg. Co., Sheboygan, Wis. Two models accommodate the range from 5- to 9-in. widths and 8- to 11-in. lengths of packages up to ¾ in. deep. The machine is fully automatic.

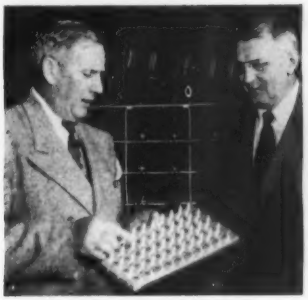


AUTOMATIC TRANSFERRING and packaging can be carried out on this Transpack, offered by Hosiery Mill Accessories Co., Inc., Northampton, Mass. The machine is said to be capable of producing 500 doz. per 8 hr. and to transfer print in multiple colors on cellophane and other packaging.



TUBULAR KNIT GOODS are folded and laid out in neat stacks by Utica Novelty & Mill Specialty Co., Utica, N. Y., new automatic lay-up machine. The traveling feed rolls press out and stack the tubular goods to heights of 7 or 10 in. Vertical fluorescent light tubes provide through-the-fabric lighting for cloth inspection during the folding process.

▶ **Of interest to knitters** making heavy socks that require two ties was the double-tie Saxmayer machine exhibited by National Bundle Tyer Co., Blissfield, Mich. The unit, model 9-DF, places two parallel ties around any bundle. Feeder and tyer are automatic.



A QUILL BOARD with automatic board-loading attachment for use on Barber-Colman winders has been developed by Sterling Engineering & Mfg. Co., Inc., Wilkes-Barre, Pa. George McGee (left), vice-president of sales, is shown as he points out to John K. Cochran, general manager, Duplan Corp., some of the features of this quill board, which holds 50 quills. It is made of aluminum with cadmium-plated steel-lifting hooks.

▶ **A new inertia dampener** and shock absorber in the form of a washer for its line of warp tension compensators was shown by Walter Kidde & Co., Belleville, N. J. The washer, available for both new compensators and those already in the field, eliminates any inherent sluggishness in immediate tension regulation that sometimes goes with starting up. It also absorbs by mechanical action any pull generated on the control arm by plucks or snags on the yarn in the creel.

▶ **Heanium**, a new material for use in thread guides, was introduced by Heany Industrial Ceramic Corp., New Haven 3, Conn. The new product has a hardness number of 9 as against 10 for diamond. Since the structure of Heanium is the same throughout, any wear simply exposes a new surface of the same material. Guides can be supplied in any finish. Heanium is not affected by acids or alkalis.

▶ **A looper knife** made of tungsten carbide was shown by H. E. Crawford Mill Supply Co., 824 S. Main St., High Point, N. C. The knife is said to have run 36 mo. without sharpening in a mill that normally sharpens knives every 2 days. Sinker cams of a new steel were also shown. The cams had run 2 yr. in a mill where cam life averaged 6 mo.

▶ **Pre-shaped steels**, designed to eliminate machining operations, were shown by A. Milne & Co., 745 Washington Ave., New York 14, N. Y. The steels are used in a wide range of machinery, including knitting cams.

▶ **A new lubricating feature** for their conical ring was shown by Herr Manufacturing Co., 318-320 Franklin St., Buffalo 2, N. Y. The traveler is now lubricated by special oil-bearing bushings set in the ring (2 for small rings, 4 for large rings). This additional lubrication supplements the regular oiling system and is said to allow higher spindle speeds and longer traveler life.

▶ **Improvements** on their Gyrotex bobbin were shown by The Formica Co., 4692 Spring Grove Ave., Cincinnati, Ohio. The bobbin is designed for nylon and other high-tenacity fibers and is said to be effective up to 20,000 rpm.

▶ **An improved stitch gauge** was in operation at the booth of The Knitmaster Co., 411 N. E. 19th Ave., Portland, Ore. The new model has a double indicator hand that stays at the highest dial reading. An offset nozzle now makes the gauge on links-and-links, as well as latch-needle machines. The Knitmaster, which sells for $100, is said to cut average stitch-setting time from 4 hr. to 12 min.

▶ **Frame-conditioning** of twisters and spinning frames was announced by Air-Perme-Ator Mfg. Co., 300 Preakness Ave., Paterson, N. J. This new development is designed to maintain high humidity where it is needed and to evacuate heat from spindles without the necessity of humidifying an entire room.

Working conditions in spinning rooms are said to be improved, and product strength maintained and improved by use of this system.

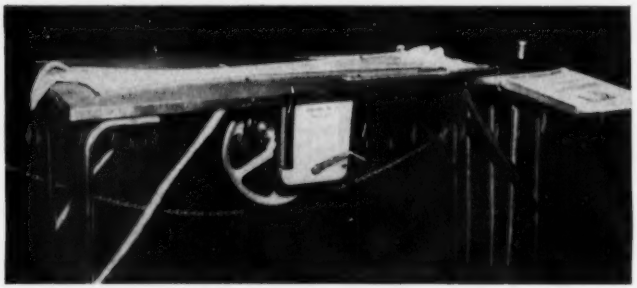
▶ **Details** of an improved winder and redraw guide will be announced soon, according to American Lava Corp., Chattanooga 5, Tenn. The new Alsimag guides will have a guard wire to keep yarn from looping out.

Supplies and Equipment

A WIDE-FIELD MICROSCOPE, model JK-2, can be used for a great variety of fabrics. Bausch and Lomb Optical Co., 635 St. Paul Street, Rochester, N. Y., manufacturers of this microscope, recommend it for quality-control use on a production level. It can be adapted for indirect, as well as direct, illumination; and is available in powers from 6 to 75 magnification. It has adjustable eyepieces, wheel adjustment for focusing, and two-position drum.

THE MAGNI-RAY, an illuminated magnifier for precision inspection in both high and low power, was shown at the booth of George Scherr Co., Inc., 200 Lafayette St., New York, N. Y. Ernest R. Schwengber (right), small-tool manager of the firm, points out details of the magnifier to H. R. Bagnall, technical representative of Lustre Fibres, Inc. In addition to its own built-in light supply, the magnifier has optical-glass lenses ranging from 3 to 5 in. in diameter.

THE WILDER MICRO PROJECTOR, a popular-priced ($395) inspecting instrument with magnifications up to 100, was pointed out during the show to Dick Scott of *Textile World* by Ernest Schwengber of George Scherr Co. Intermediate optic changes are also possible at magnifications of 10, 20, 32½, and 50. The instrument is useful in checking fabric-construction deviations, as well as machinery-parts variations from standard dimensions.



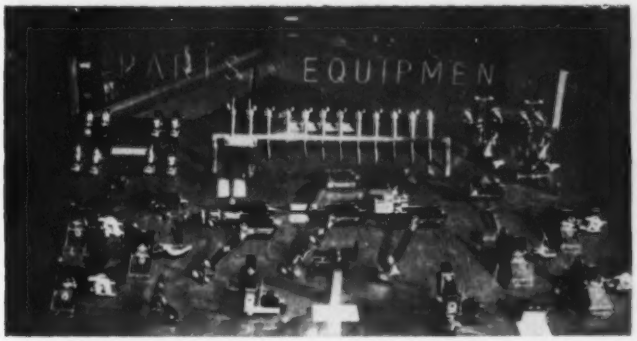
HOSIERY BLANKS are tested to show differences in the length of each side of the stocking on this tester demonstroted by Morris Speizman Co., 508 W. Fifth St., Charlotte, N. C.

A VIEWING DEVICE with a magnification of 26 powers has been developed for the inspection of fabrics from one end to the other. The device will be put into production soon by Alfred Hofmann and Co. It is expected to cost about $420. Features are adjustment knobs for vertical and horizontal movement of the sample and a focusing knob on top.

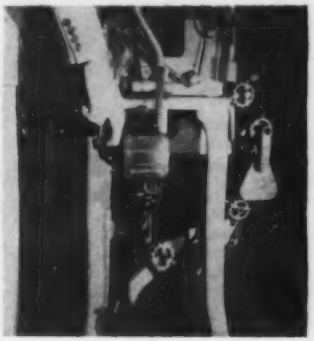
► Lint-tight manual starters approved by Factory Mutual Insurance Co. for areas where lint is present, were on display in five sizes at the booth of Westinghouse Electric Corp., Pittsburgh, Pa. Available with line terminals at either the top or bottom of the starter box, the unit has a compress latch that clamps the cover onto the gasket tightly. Bonderite-treated paint surfaces prevent spread of corrosion at any scratched points that may eventually appear.

► A slow-starting motor equipped with a special ring-type clutch for rapid, smooth starting and stopping drove a doubler shown by U. S. Textile Machine Co. The 5-hp. motor is made by Warner Electric Brake & Clutch Co., Beloit, Wis.

THIS MONOFILAMENT TWIST take-up device was shown by United States Testing Co., 1415 Park Avenue, Hoboken, N. J. The device can be used on motor- or hand-driven twist testers.



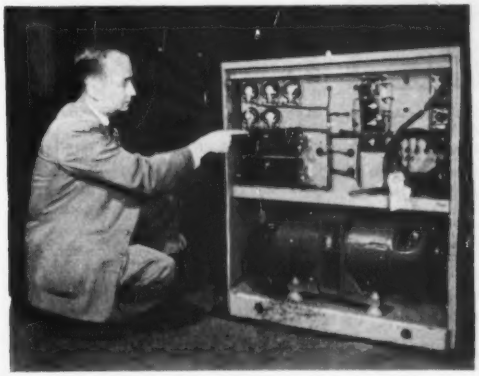
KNITTING-MACHINE STOP MOTIONS made by Stop Motion Devices Corp., 1471 Fulton St., Brooklyn, N. Y., were on display. Several major knitting machine manufacturers also had their machines equipped with this company's latest types of stop motions. Devices include press-off detectors, retractable needle protectors, and yarn-out knock-offs.



"SAFETY CONTROLLER" shown by Stop Motion Devices Corp., stops a knitting machine quickly and safely if and when electric current fails.

SPECIAL THY-MO-TROL 5-hp. drive designed for a TMW full-fashioned hosiery machine was a part of the GE exhibit that J. J. McCarthy, engineer of the company, is here explaining to Bert Gottschalk. Advantages of the drive include quick speed change, no overshooting, dynamic braking for rapid deceleration, a wide range of pre-set speeds adjustable by individual potentiometers, and close speed regulation under loads varying from 0 to 140%.

NEW UPTWISTER MOTOR for U. S. Textile, Atwood, and Fletcher uptwisters was a new product shown by General Electric Co., Schenectady, N. Y. The vertical motor, of compact design, is 5 hp., 550 v., 1,200 rpm., 3 phase, 60 cycle. R. P. Prechter (right) GE industrial engineering division, shows motor to Russell Barney (left) quality-control foreman, Atwater Throwing Mill, Plymouth, Pa., and James Kishbaugh, coning foreman of same organization at Wilkes-Barre, Pa.



► **A fractional-hp. Thy-Mo-Trol drive** for circular-hosiery-knitting machines was shown by General Electric Co., Schenectady, N. Y. Equipped with start-stop push-button control, the circular-machine drive has cam-operated switches with several potentiometers at selected speeds.

► **Reading Testing Laboratories,** 245 Poplar St., Reading, Pa., announced a full-fashioned knitting system that eliminates troughs and wicks. The Pabricator, as the technique is called, uses only one wetting solution for all nylon yarns, sized or unsized.

DISK-TYPE SELENIUM EXCITER being pointed out by C. P. Walker, of Westinghouse, is the important element of the new full-fashioned knitting-machine drive shown by Westinghouse Electric Corp., Pittsburgh, Pa. The exciter eliminates all electronic tubes and belts and their attendant periodic replacement. The rectifier is fed from the transformer to give excitation power to both the d.c. generator and the d.c. driving motor on full-fashioned machines. Both the dynamically balanced motor-generator set and the d.c. driving motor have pre-lubricated sealed ball bearings that eliminate further lubrication. Through regenerative breaking and no overshooting, the drive gives quick and accurate speed responses.

Yarns, Dyes, and Chemicals

▶ **Fiber E** (a new version of viscose-process rayon) and Dacron polyester fiber and fabrics were exhibited at the E. I. du Pont de Nemours & Co., Inc., booth. Fiber E crimps when treated with caustic and gives many unusual effects in various types of fabrics. Finishes range from soft sueded to rough-surfaced nubby effects, depending on filament size, height of pile or nap, density, and strength of the caustic used in finishing. [Dacron-fabric properties are discussed in this issue of TEXTILE WORLD on page 112.]

▶ **A new line** of synthetic yarns was presented by Globe Dye Works, Philadelphia, Pa. The line includes yarns made of dynel, Chemstrand, Orlon, Dacron, blends of dynel and Vicara, and blends of Vicara, wool, and nylon. Globe also exhibited chrome and fluorescent shades on worsted yarns.

▶ **A tapestry fringe yarn** of Du Pont Fiber E, made by knitting, cutting, and treating with caustic, was shown by Paul A. Barker, Inc., 1182 Broadway, New York 1, N. Y. A nylon yarn with woolen nubs attracted considerable attention. A no-shed angora yarn—30% Angora, 70% nylon—was shown both in yarn form and in a sweater that bore out the shedding claim. An adjoining exhibit featured resist-dyed nylon yarn used for the decorative heels on full-fashioned hosiery.

▶ **High-twist hosiery yarn** that knits without a corkscrew effect was featured at the exhibit of Leon-Ferenbach, Inc., 40 W. 40th St., New York, N. Y. The 40-turn den. yarn comes in both right and left twists and is to be knitted two left, one right in the stocking. The resulting stocking has an apparent barré effect that disappears when the stocking is worn. The greater twist is said to give better wearing qualities to stockings, more elasticity, more dullness, and greater cling.

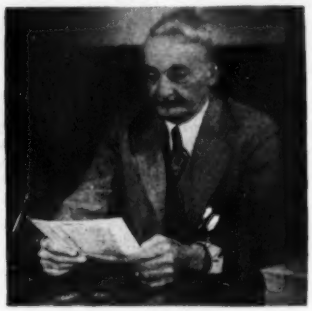
▶ **A new dyeing assistant,** said to be effective for processing Dacron polyester fiber, has been developed by Amalgamated Chemical Corp., Philadelphia 34, Pa. This assistant, known as **Amidye VX,** is a solution of a sodium salt of a complex phenol, combined with suitable surface-active agents. It is said to have been used successfully in commercial production on Dacron in various forms. Yarn has been package dyed; hosiery and sweaters have been dyed in the usual hosiery-dyeing equipment; and ordinary dyeing conditions have been found suitable.

▶ A new wetting agent, **Dynesol F-20,** was also shown by Amalgamated. This product is the first of a new series of Dynesols, and is available on a limited commercial scale. It is said to be effective in extremely low concentrations. A strong dispersing agent, **Evenate SX,** was also shown. It is recommended as a dispersing and leveling agent for most types of dyestuffs, especially acetate dyes and selected neutral-dyeing acid colors.

▶ **Two new dyeing assistants** and one new finishing agent were shown by Commonwealth Color and Chemical Co., 3240 Grace Ave., New York 67, N. Y. **Veedex,** intended as an assistant for the preparation and dyeing of Dacron polyester fiber, is a combination of an aromatic carboxylic acid and a compatible dyeing assistant. The main purpose of Veedex is to swell Dacron so that the dye solution can penetrate the surface of the fiber. A similar product, **Orasist,** is intended as an assistant for the preparation and dyeing of Orlon acrylic fiber A-3, Orlon fiber stock, and Orlon type 41. **Nilaton 51,** a new finish for nylon hosiery, was the third new product shown by Commonwealth in addition to its regular line.

▶ **Among the new products** exhibited by Richmond Oil, Soap and Chemical Co., Inc., 1041 Frankford Ave., Philadelphia 25, Pa., were:

1. **Nylsperse**—for leveling multifilament and monofilament nylon
2. **Dyesoft**—a non-ionic softener for use in dyeing any fiber
3. **Coning compound 3-682**—to lubricate and soften any yarns



ALBERT C. RAU, Campbell-Fairbanks, Inc., Boston, Mass., manager of the 40th Knitting Arts Exhibition, held in Atlantic City, N. J. last month, received many commendations on the layout of the exhibit space and the daily dovetailing of all the services that go into a well-run show. The exhibition was under the auspices of the National Association of Hosiery Manufacturers and was held in conjunction with the two-day 14th Hosiery Industry Conference which took place at the Claridge Hotel in Atlantic City.

4. **Sulphur color developer**—to develop and soften, remove bronziness, brighten colors
5. **Friction rod lubricant**—for treating friction leathers to prevent sticking and to give longer life. The company also showed a hand cream that softens the hands without leaving them greasy. The cream can be used in any phase of synthetics production where operators handle the product.

▶ **Cerfak No. 115,** a liquid non-ionic detergent made on a new chemical basis, was featured as a new product at the exhibit of E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia, Pa. Cerfak No. 115 satisfactorily replaces other detergents that are composed of materials now in restricted supply. It scours well in soft, tap, or hard water, and has a fast wetting speed. **Softex 460,** an anionic substantive textile-fiber softener for cottons, spun rayons, and wool, was also introduced to the trade.

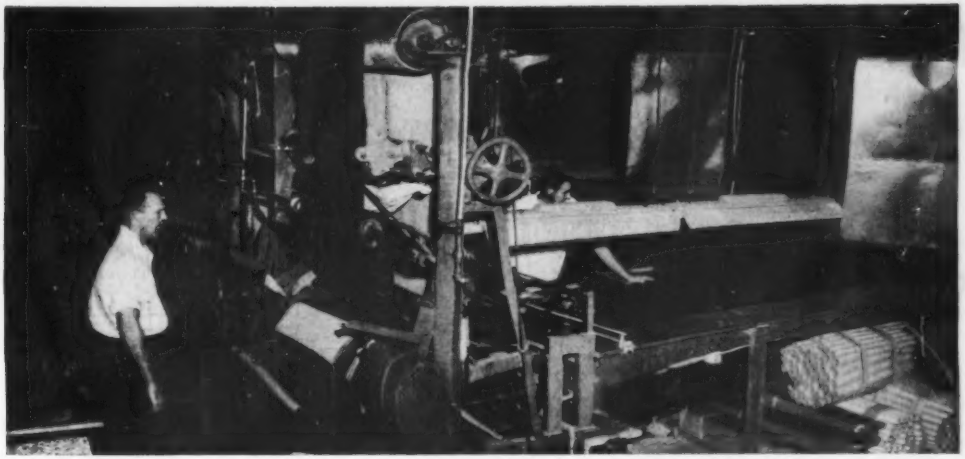
▶ **Sunotex Machine Oil Light** was a new product featured by Sun Oil Co. Philadelphia, Pa. in its booth. The new oil, engineered to protect needles, sinkers, and related parts over long periods of time, scours out completely in fabric finishing. It is said to have excellent light stability, to prevent rust accumulation, and to reduce wear.

▶ **Shrinkage control** of circular-knit, piece-dyed goods is the feature of the NTOR process shown by Indian Orchard Finishing Co., Indian Orchard, Mass. This new process, designed to relieve and relax all tensions induced in knitting, is said to minimize shrinkage and give consistently uniform fabrics.

▶ **Luberoil,** an oil additive guaranteed to reduce friction and minimize wear, was given its first textile showing by Luberoil Petroleum Corp., 4821 N. Broadway, St. Louis 7, Mo. A demonstration showed bearing wear with and without Luberoil. The oil is recommended for use with a regular lubricant in a 6- or 9-to-1 proportion.

▶ **A grease** that can be used for every purpose where grease is needed in a knitting mill, except in dryer sections where temperatures go above 350° F., was shown by Shell Oil Co., 50 W. 50th St., New York 20, N. Y. The grease has a lithium base. It is water-resistant and heat-resistant up to 350° F. The grease comes in Nos. 1, 2, and 3 consistencies; but the No. 2 consistency is the grease used for most purposes. Chief advantages of using this grease are the lower lubricant stock necessary and simplification of the lubricating job.

▶ **Kelpic,** a shrinkage-control process for wool, was the feature at the booth of S & M Dye Works, Inc., 3419 Richmond St., Philadelphia 34, Pa. The process treats wool in any form, but shrinkage control for knit goods is said to be best applied in the skein.



FINISHED COATED FABRIC has a final inspection before it is rolled into bolt form for shipping.

VINYL-COATED FABRICS Are Not Hard To Process Continuously

Woodhead plant of Graniteville Co. has, through research and engineering, worked out equipment and processing methods that

- ***Insure a minimum of stop-offs on the continuous ranges***
- ***Control temperatures and air flow all along the line***
- ***Use heated air to best advantage during processing***

By E. DALTON WHITE, *McGraw-Hill Atlanta Bureau*

Steps in Coating Fabrics at Graniteville Woodhead Plant

1. Waterproofing and mildewproofing on saturator on the preparation range
2. Sizing on tenter frame
3. Second set of dry cans
4. Inspection
5. Calendering
6. Application of vinyl-resin coating
7. Drying chamber
8. Fusing chamber
9. Cooling range
6a. Festoon machine (oil paints, lacquers)
7a. Loop dryer
First section — 150° F.
Second section — 180° F.
Third section — 200° F.
8a. Cooling chamber
10. Inspection
11. Rolling and packing for shipment

RESEARCH AND ENGINEERING have played a big part in the development of equipment and processing methods for vinyl-coated fabrics in the new Woodhead plant of Graniteville Co., Graniteville, S. C. Various fabrics, principally ducks, are used as a base for the vinyl-plastic or other types of coating that Woodhead processes on a continuous basis. And these coated fabrics, both striped and solid-color, are reported to be receiving ever increasing public acceptance.

All fabric to be vinyl-coated at Woodhead is woven in the Graniteville organization. It is then mineral-dyed at the new Gregg plant [TW, May, '51, p. 124] and sent to Woodhead. This procedure gives the company an integrated operation and allows it to control quality from raw cotton to finished product.

Operating Procedure

First process in the Woodhead plant is the waterproofing and mildew-resistant treatment. Ingredients are mixed in two 300-gal. tanks and pumped to the saturator on the preparation range. As the fabric passes through the bath, it is well impregnated with these materials. Excess liquid is removed by the squeeze rolls. The wet fabric then goes to the first

TWO NEW OILS SIMPLIFY LUBRICATION

Sunotex Machine Oil and Sunotex Machine Oil Light Give Superior Lubrication to 90% of the Friction Points of Textile Equipment

For bearings, cams, slides, gears

SUNOTEX MACHINE OIL

Textile mills no longer have to stock a confusing variety of oils for different machines. Sunotex Machine Oil—because of the many special qualities which have been built into it—meets *every* requirement of a general-purpose textile machine oil. Mills have been able to replace as many as five separate machine oils with just the one grade of Sunotex Machine Oil.

ELIMINATES GUESSWORK, SAVES TIME

Sunotex Machine Oil assures a faster, better maintenance job. Since there's only one oil to be used for bearings, gears, cams, slides and similar parts, no mistake can be made—no machine failure from wrong lubrication is possible. Further, with one lubricant instead of many for these parts, oil inventories are simplified.

HIGH LIGHT-STABILITY ENDS HARMFUL STAINING

Sunotex Machine Oil makes possible longer undyed fabric storage. Compared with competitive products in a standard Fade-Ometer test, Sunotex Machine Oil proved definitely superior in non-staining characteristics—*superior even to white oils.*

SCOURS OUT COMPLETELY

Sunotex Machine Oil saves money. Mill tests prove that Sunotex Machine Oil scours out completely from all fabrics — synthetics, wool and cotton.

PREVENTS RUSTING

Sunotex Machine Oil makes machines last longer. It assures absolute rust protection. Special metal-wetting properties displace any moisture present with a protective film of oil.

WITHSTANDS EXTREME PRESSURES

Sunotex Machine Oil always stays on the job. It lengthens equipment life by reducing friction and withstanding the extreme pressures found in some textile machines. Because it doesn't thin out excessively as the operating temperature increases, a cooling film of lubricant always remains in the bearings.

ADHESIVE

Sunotex Machine Oil keeps both the mill and the fabric clean. It stays on machine parts and off the fabric. Oil consumption and dye-resisting stains are minimized. Floors remain cleaner and safer.

For needles, sinkers, dividers and related parts

SUNOTEX MACHINE OIL LIGHT

This oil is essentially the same as Sunotex Machine Oil, but lighter in viscosity. It gives outstanding protection to needles at the critical point of presser contact and to other equipment needing a lighter viscosity oil. It is particularly effective in the lubrication of rings and travelers of spinning, twister and roving frames.

TO FIND OUT FOR YOURSELF HOW MANY MACHINES THESE OILS CAN PROTECT, SEND THIS COUPON FOR COMPLETE LUBRICATION DATA SHEETS

SUN OIL COMPANY, Dept. T-6, Philadelphia 3, Pa.

Please send me Lubrication Data Sheets showing all the kinds of textile machines which can be lubricated by your two new oils.

My mill ☐ knits ☐ weaves ☐ cotton ☐ wool ☐ synthetics ☐ spins

Name_____

Title_____

Company_____

City_____ Zone_____ State_____

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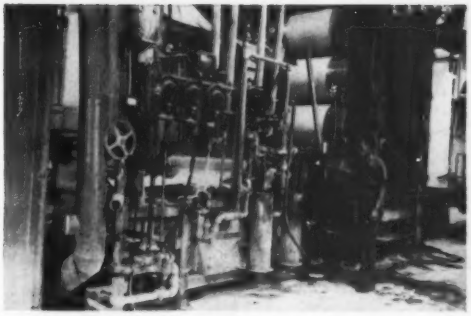
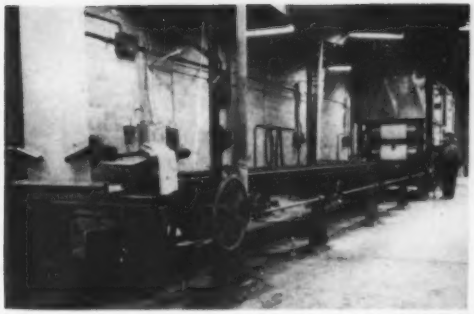


PREPARATION RANGE (saturator) applies both waterproofing and mildew repellants to the fabric before it is squeezed and run onto the first dry cans.



TENTER FRAME takes partially dried fabric and sets it properly before it is thoroughly dried on dry cans at far end of the continuous range.

set of dry cans and is partially dried.

From here the fabric proceeds to the tenter frame for proper sizing and setting before it goes over the second set of dry cans for a thorough drying. The fabric is then rolled for inspection, preliminary to coating.

It is most important that all wrinkles and imperfections be cut from the fabric at the inspection station; otherwise streaks in the vinyl coating will result. Equally important is that calendering be thorough enough to provide a completely smooth surface to receive the coating material.

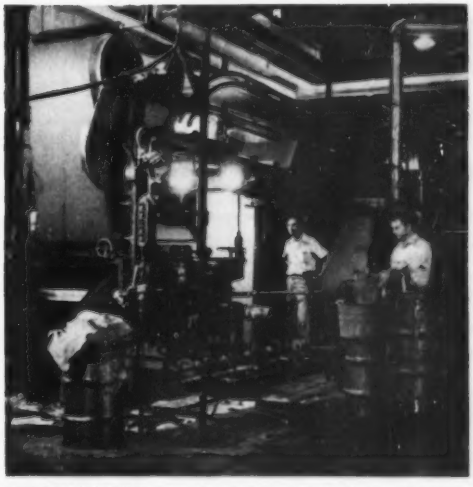
The coating material is then applied to the fabric in such a way that a bath is formed on the top or facing side. It is fed onto the fabric from a storage tank in a controlled flow that deposits just a sufficient amount on any given area of fabric. Any excess is removed as the fabric passes beneath a coating knife.

From the application machine, the fabric goes to a 50-ft.-long oven or drying chamber, where volatile solvents are removed at temperatures ranging from 200 to 300° F., depending on several factors. The cloth then passes into a 50-ft.-long fusing cham-

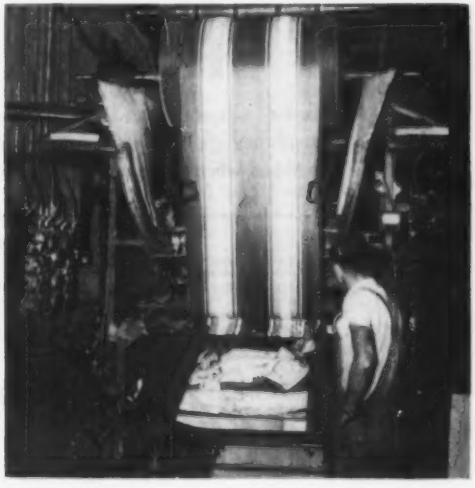
(Continued on page 194)

EXCESS VINYL-RESIN COATING is scraped off the fabric by the coating knife as the fabric passes under it after leaving the application bath on the way to the drying chamber. Thickness of the coating varies with the tension on the fabric.

A VARIATION IN THE PROCEDURE . . . .



FESTOON MACHINE can apply oil paint on duck fabrics and lacquer-type formulations on drills. Strained paint is pumped under controlled pressure to give even distribution during application to fabric.



EIGHT COLORS can be applied to fabric at one time on the festoon machine. After painting, the fabric hangs in a loop dryer 500 ft. long at an average temperature of 200° F.

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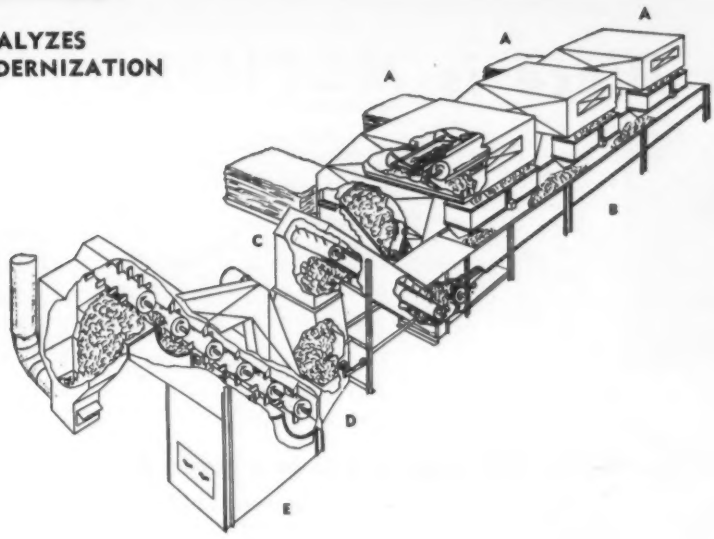
ASME ANALYZES MILL MODERNIZATION



FIBER BLENDING
Is Best Done Mechanically

► ***Blending lines thoroughly mix various opened fibers by the simultaneous addition of small, proportionalized increments of automatically weighed stock.***

► ***A rayon, a cotton, and a woolen mill, in examples given by the author, can make savings of $32,000, $12,500, and one-half of the hours formerly given to other blending methods, respectively, through the use of automatic blending lines.***

By W. F. LEINEWEBER, JR., *Chief Engineer, Textile Equipment Corp.*

CURRENTLY AVAILABLE automatic-weighing blending feeders can meet the need for a means of accurately proportioning fibers by weight. These feeders, properly used, can also increase production with less manpower and without additional floor space.

If correct percentages of fibers are not in the mix at the outset, they are certainly not going to be added correctly anywhere else along the line. Without accurately weighed proportions, no accurate blend of fibers can be expected.

Automatic weighing feeders also fill the need for a method of taking weighed proportions of fibers and seeing that they are effectively blended before they reach the picker.

Automatic weighing feeders will weigh out small increments of stock for better and more effective control. It is easier to blend thoroughly a pound of rayon and a pound of wool, for example, than it is to do the same with a 50-lb. mass of each fiber. The time element involved in producing 100 lb. of blended stock, through small increments, is less than that which it takes to obtain like fiber distribution with two 50-lb. masses, provided suitable means of rapid, accurate weighings are available.

To obtain anywhere near uniform distribution in a 50-35-15 blend of a 100-lb. total is virtually impossible, even with continued reblending of the mass.

Solution to the Problem

When we reduce, as an example, the above proportions (50-35-15) to small increments—say to 30 oz. of rayon, 21 oz. of cotton, and 9 oz. of wool (the same relative proportions)—we can expect better distribution of the 9 oz. of wool through each total 60 oz. since each of these smaller increments is more opened and susceptible to distribution than a bulky compressed mass of 100 lb.

To clarify the procedure on a mill-production scale, in an automatic blending system we can provide an individual feeder A (see diagrammatic sketch above this text) for each of the fibers in the blend. To parallel the foregoing example of 50% rayon, 35% cotton, and 15% wool, we would then use three feeders—one for each fiber. By incorporating an automatic weight system in the feeders, we can preset the feeders to weigh out predetermined amounts of the various fibers.

In this example of 30 oz. of rayon, 21 oz. of cotton, and 9 oz. of wool, we would load each automatic feeder with a large quantity and start up the line. The wool feeder would, naturally, weigh out its 9 oz. before the others. But this wool feeder would

Digest of a paper given at the spring meeting of the ASME at Atlanta, Ga.

"This Piece is MOTHPROOFED!"

Right! But yours had to be a guess, for . . .

. . . you just can't detect the presence of Mitin* Mothproofing in wool except by laboratory test. Direct comparison reveals no difference in appearance, hand or odor between Mitin Mothproofed and conventional pieces of the same fabric.

This fact has sales significance for all makers and processors of wool and wool products. It means you can now offer consumers your accustomed quality *plus* the effective protection of durable mothproofing and its thorough, worry-free convenience.

Retailers have indicated ready and widespread interest in Mitin Mothproofed lines that can be turned to your advantage. Whether your line is woolens, worsteds or combinations of wool with other fibres, for wearing apparel, sportswear, knitwear, blankets, upholstery fabrics, carpets, rugs or knitting yarns, Mitin Mothproofing offers useful promotional ideas for 1951 merchandising conditions.

Call Geigy and ask to have a representative show you how the simple application procedure can be worked into your operations. He will also discuss with you the details of labelling and guarantee which make Mitin Mothproofing a promotion *plus*.

* U.S. Pat. No. 2,311,062

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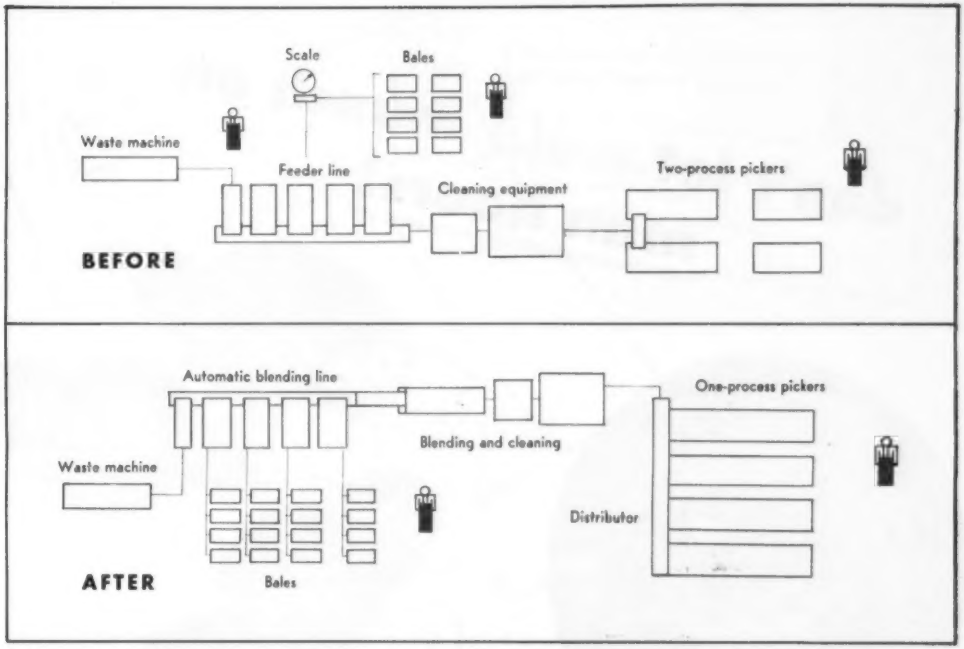

***BEFORE-AND-AFTER COMPARISON** shows how installing an automatic blending line, which lets down in cycles small and accurately weighed fiber increments for subsequent blending and cleaning, can assist any mill in getting a better end product with a lower labor cost.*

hold the 9 oz. of wool until the other two had weighed out their respective weights.

As soon as the last machine in the line reaches its predetermined weight, all feeders discharge their respective weights simultaneously onto a horizontal belt conveyor *B* underneath the weighing boxes.

We now have our well-opened, accurately proportioned amounts of each fiber, but they are in separate individual packages on the conveyor. These individual packages are carried up an incline conveyor *C* and deposited one on top of the other in sandwich form in a holding chamber *D*. Here they remain while the feeders automatically repeat their cycle.

When they again dump simultaneously, the "sandwich" in the holding chamber *D* (totaling less than 4 lb.) is automatically released to a suitable blending medium *E* as a small sandwich built up of accurately proportioned amounts of each fiber. The task of blending these fibers further when delivered in this form is comparatively easy.

Productive capacity ranges up to 500 lb. per hr. for each feeder, depending on the proportions in the blend. The complete cycle of weighing is approximately 13½ sec.

Typical Mill Examples

1 A synthetic-staple mill requires 130,000 lb. of blended stock, based on a 144-hr. week. Of this total, the following blends are run in the quantities noted:

50-50	75,000 lb.
50-35-15	20,000 lb.
70-30	20,000 lb.
100%	15,000 lb.
	130,000 lb. total

Three two-process pickers are used, each with a capacity at 100% efficiency of 440 lb. per hr. and at 80% normal efficiency a capacity of approximately 350 lb. per hr. The present method of processing these blends in this particular mill could well be arranged differently.

Briefly, touching upon the more important aspects, we can eliminate four men per shift from the over-all blending and picking operation. This rearrangement amounts to a $624 saving in a week, or $32,000 in a year.

(*Continued on page 222*)

Test No.	Date	Bobbin	Blend	Acetone Soluble Acetates
1	5-14	Warp	70-30	29.78%
2	5-14	Filling	70-30	29.17
3	5-14	Warp	50-50	48.92
4	5-14	Filling	50-50	48.89
5	5-15	Warp	70-30	30.64
6	5-15	Filling	70-30	29.28
7	5-15	Warp	50-50	48.91
8	5-15	Filling	50-50	49.75
9	5-16	Warp	70-30	29.00
10	5-16	Filling	70-30	28.85
11	5-16	Warp	50-50	49.14
12	5-16	Filling	50-50	49.85

***TEST RESULTS** on actual bobbin checks show that fiber-content variation, even after several intervening processes, is almost negligible when fibers are mechanically blended as raw stock.*

Are you using Dowicide products to guard against lost man hours, delayed orders and wasted materials?

For many years, Dowicide products have been used by textile manufacturers to preserve the desirable properties of starch as a sizing material, and as a control against bacteria which may degrade starch solutions and make necessary the production of replacement batches.

Mold growth on gray goods has often meant loss through discoloration. Dowicide industrial germicides and fungicides may be incorporated in size solutions to give warp yarn and gray goods mold resistance, saving valuable yards and making additional processing unnecessary. If you are not already profiting from the added protection which these products give, investigate, today, this accepted means of bringing microbial control into your plant. Dow maintains complete laboratory facilities to help you solve your problems. Contact your nearest sales office or write direct to Midland for additional information on Dowicide products.

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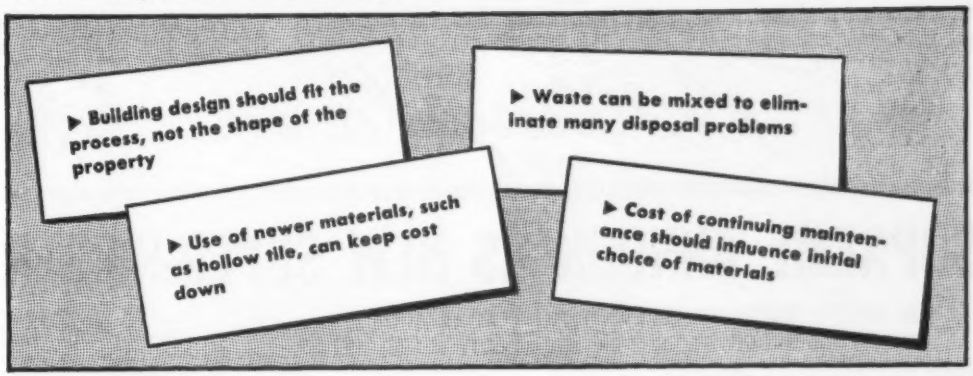

▶ Building design should fit the process, not the shape of the property
▶ Waste can be mixed to eliminate many disposal problems
▶ Use of newer materials, such as hollow tile, can keep cost down
▶ Cost of continuing maintenance should influence initial choice of materials

Good PLANT DESIGN Can Cut Finishing Costs

By E. C. GWALTNEY, Robert & Co. Associates

THE COST OF bleaching, dyeing, and finishing can frequently be reduced even before you build your plant by proper plant design and construction. Planning must include not only new machinery and new processes but the least expensive methods of (1) getting goods in and out of the plant; (2) supplying chemicals, steam, and water to the processes; and (3) scheduling proper maintenance and upkeep of buildings and equipment to obtain the maximum efficiency. The modern building must be designed to help the manager in this work and not hinder or burden his efforts. For this reason, a building today cannot be designed in a careless manner or be of any haphazard shape merely to fit a piece of property that happens to be handy. It must be built around the machinery and processes just as if it were a separate process of its own.

Compromises must be made in all decisions from the site selection down to the smallest detail. Here nothing outweighs experience and good judgment.

Site Comes First

It is always difficult to find a perfect site for any industrial plant, but for a textile-finishing plant a supply of suitable water and a means of waste disposal are essential. A water supply of less than 3-gr. hardness is desirable, but here we may compromise, as water softeners are relatively inexpensive to operate.

Other important factors in selecting the proper site include proper drainage, adequate labor supply, transportation facilities, room for expansion, taxes, condition of soil for foundations, and fuel costs.

Type and Volume of Goods Govern Machinery Layout

After a descision has been made on the type and volume of goods to be finished, the machinery layout must be developed with flow in as nearly a straight line as possible. Particular attention must be paid to adequate storage areas and future-expansion possibilities. Buildings should be of one-story construction for flexibility and simplicity in handling goods. The warehouse area requires individual treatment and can, if the site permits, be of multi-story design.

After deciding on the site and the size and shape of the main building, other design factors to be considered include location of the boiler plant, water storage, and other auxiliary buildings. The locations of these units should take into account the direction of future expansion.

* * *

ASME Program Rolls Along

▶ This article, as well as the one on page 139, is based on a paper delivered at the recent meeting of the Textile Section, American Society of Mechanical Engineers, in Atlanta, Ga. The papers continue the ASME program of analyzing mill-modernization trends [TW, Dec., '50, p. 103].

Better Materials Account for Higher Costs

Efficiency is the criterion today rather than cost of materials. New plants cost more today, but construction costs alone are not the sole reason. Better materials and methods are being used: steel instead of timber, fluorescent lighting instead of incandescent, and mechanical ventilation instead of none. These and other improvements have increased costs but give wider column spacing, better lighting, and more pleasant working conditions. A significant point is that with modern, high-speed finishing machinery and a new plant of proper design for efficient operation, the total carrying charges on such an investment will probably not exceed 10% of the total annual payroll of the plant.

Consider Long-Term Upkeep In Selecting Initial Materials

In choosing the type of materials to be used in the building, the amount of money available for plant construction must, of course, first be considered. However, with maintenance and upkeep costs to be reckoned with throughout the useful life of the buildings, and because of the necessity of high heat and moisture in finishing

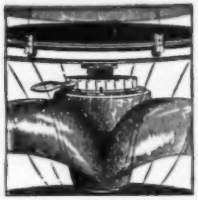
Knitting News

SUPREME ANNOUNCES NEW SUPER-RIBBER

NEW SUPREME RIBBER UTILIZES LATEST TECHNICAL ADVANCES TO GIVE TREMENDOUS PRODUCTION AND QUALITY BONUS

Before buying his next machine, the ribbed cloth knitter should see how Supreme's new machine, the Model SR, will improve quality and increase production. Some of the advantages and mechanical features which make this machine an outstanding production unit are listed below.

Some Of The Model SR's Design Features And Exclusive Knitting Advantages



1. A single action, micromatic, dial-elevating and lowering adjustment gives the knitter accurate and uniform stitch adjustment at the flip of a finger. Knit as tight or loose a stitch as desired.

2. Sturdy, dogless, tripod construction eliminates pinch lines and insures positive alignment of all elements at all times. Simplified and instantaneous synchronization of dial to cylinder needles.

3. An exclusive, new, simple method for speedily converting from plain to swiss rib.

4. Individual, channeled cams of substantial thickness lock needles in proper position at all times and eliminate possibilities of smash-ups. The knitter can remove a section for inspection and cleaning and replace it without having to realign needles by hand. The thickness of the cams provides large bearing surface for long wear, permits easier cleaning and assures less accumulation of dirt and lint.

5. Large open areas around cylinder and dial assure easy cleaning, inspection and maintenance. Greater space between knitting feeds allows quick and easy access to cloth and needles at knitting level for simple pick-up and cleaning.

6. The SR can knit a wide range and variety of yarns from extremely coarse to extremely fine with uniform quality and with a minimum of adjustments. Weak or slubbed yarns will not cause damages or interrupt production.

7. Produces cloth of high elasticity. This assures better shape retention after processing and subsequent washings.

8. Automatic control insures uniform cloth roll size. Machine stops automatically when predetermined roll size is completed.

9. Roller bearing thrust for entire center drive. Overhead gear-driven dial with center spindle of special alloy steel, hardened and ground for long wear and trouble-free operation.

The New Supreme Model SR will be available in the following sizes:

7"—10 Feeds	14"—20 Feeds	21"—30 Feeds
8"—12 Feeds	15"—22 Feeds	22"—32 Feeds
9"—12 Feeds	16"—24 Feeds	23"—34 Feeds
10"—14 Feeds	17"—24 Feeds	24"—36 Feeds
11"—16 Feeds	18"—26 Feeds	26"—38 Feeds
12"—18 Feeds	19"—28 Feeds	28"—42 Feeds
13"—18 Feeds	20"—30 Feeds	30"—44 Feeds

Supreme's Proven-In-Use Features Help Give New Ribber 32 Yard Per Hour Output Rate At 100% Efficiency

Supreme's entirely new line of high-speed circular rib knitting machines includes many of the revolutionary production-improving features which have made Supreme's circular jersey machines so successful. These production-boosting features include:

● *Stationary Yarn Stand* — Permits greater RPM of the cylinder, dial and knitting elements system; lets the knitter use double cone system with "pig-tail" double tieups. Assures faster stopping and starting . . . greater safety and efficiency.

● *Revolving, Floating Take-Up and Roll-Up*—Interwinding, roller-bearing supported. Uniform tension assures large, even and compact cloth rolls. Independent support prevents wear on cylinder and outer ring.

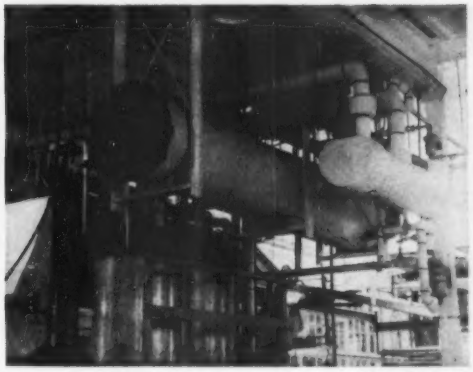
Two of the many types of ribbed fabric for underwear and outerwear that can be produced on the Model SR. Shown above is the 21"-30 feed Model SR.

● *Unit Motor Drive* – Rugged, smooth-running. Patented multi-disc clutch gives almost instant start and stop. No slippage. Smooth, silent chain drive unaffected by lint or dust. SK-139

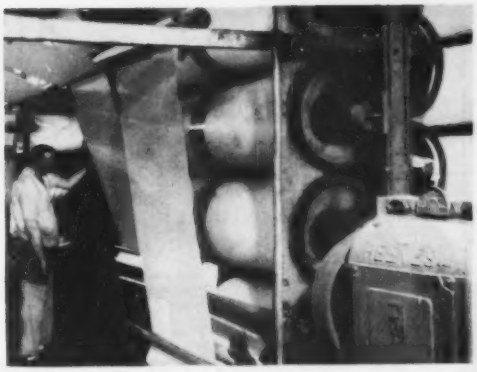
Write for further information and free cloth samples or ask for a factory demonstration of new Supreme SR.

Knitters who want to see the SR in action can do so by making an appointment to come to Supreme's plant. Simply write, wire or phone to let Supreme know when it will be convenient for you to come, and an appointment will be arranged.

SUPREME
KNITTING MACHINE CO., INC.
107 JOHNSON AVE. BROOKLYN 6, NEW YORK, N. Y.



HEAT EXCHANGERS should be used where possible. They can pay for themselves in a short time.



HOOD WITH EXHAUST FANS, whenever possible, should be placed over dry cans to remove both heat and moisture.

operations, upkeep is generally higher than in other textile-mill operations. For example, paint should be eliminated wherever possible by using materials that do not require paint. Moisture also presents the problem of condensation and drippage, and every reasonable effort should be made to control and reduce condensation.

Brick still remains the builder's standby for exterior walls, but costs of laying present a real problem. Hollow industrial tile, 8 in. thick, when used with 4-in. structural glazed tile for interior facing, has many advantages. Hollow tile is a good insulating material; the glazed-tile interior requires no paint and is easy to keep clean. With this combination the problem of condensation is reduced considerably. Inside-condensation gutters should be provided in any case.

With a properly designed fluorescent-lighting system, windows are not necessary and only add to the problems of upkeep and heat transfer. Owners of plants without windows have found no psychological problems with workers. Employees readily adapt themselves and become accustomed to working in plants with no windows. An alternative is to provide glass-block openings surrounding small-area windows for outside vision.

Modern finishing plants should have, if possible, at least 20-ft. ceilings. Lower ceilings not only make the installation of machinery, ducts, etc., difficult, but they trap heat and steam at the working level and add to the problem of ventilation.

The choice of roof decking is wood, precast concrete, or poured-concrete slab. Wood decking is the least expensive but requires continuous maintenance. Precast concrete is, of course, less expensive than poured slab but does not present a smooth-looking ceiling finish. Being lighter than poured slab, precast concrete requires less supporting structural steel.

The roof should have proper insulation to reduce condensation. The insulating thickness depends upon the type of material being used and the year-'round climatic conditions.

Floors? — Concrete. Basement? —Maybe

Floors should be of concrete. If no basement is provided, sufficient drainage trenches should be constructed to carry out the effluents and keep them separated if necessary.

Basements for carrying supply and drainage piping and wiring are expensive to construct. They have many advantages and some disadvantages. However, if used, basements should have sufficient ceiling height not only for piping and wiring but also to permit well-planned use of the floor space available. The question of a basement is strictly a matter of compromise and must be given considerable thought for each plant.

Electric wiring should not be installed in the floor of a finishing plant, especially around wet areas. For plants without basements, wiring should be installed above the floor in rigid conduits with threaded fittings. The entire system should be painted with asphaltum or other suitable paint to seal all openings and to guard against entrance of moisture and corrosive vapors.

Air Requirements Vary With Equipment

Mechanical means such as exhaust and ventilating fans must be used to supply fresh air and to exhaust heat and objectionable vapors.

Around the wet areas that go with bleaching, mercerizing, dyeing, washing, etc., a nominal amount of heated outside air should be directed near the roof line. Exhaust fans should be placed to supply adequate cooling at the operator level. Above dry cans and other vapor-producing machinery, hoods with exhaust fans should be installed to remove both heat and moisture from the lower level.

Above dry areas, as around calenders, tenters, curers and the like, the introduction of heated outside air proves of little value. The principal problem here is ventilating to maintain satisfactory temperature at the operating level.

Provide Steam at Higher Pressure Than Required

Process piping is always a major problem, and no single rule can be used to obtain the total steam requirements, main pressures, water quantity, and temperatures. Requirements of each process must be worked out individually. Steam-generating equipment should be of ample capacity to supply sufficient steam at all times. Modern high-speed machinery should not be slowed down for lack of steam.

Curers, heating ovens, dye machines, soapers, and the like, for heating liquor or water, usually require steam at 150 psi. or more. Tenters, continuous-bleaching ranges, dry cans, and the like, use steam at lower pressures. It is, therefore, generally more economical to provide steam above required pressure and to use reducing valves at each individual machine. Condensate-return lines should be large enough to hold an appreciable quantity of condensate in addition to any holding tanks that may be required. Heat exchangers are now being used whenever economically pos-

(Continued on page 188)

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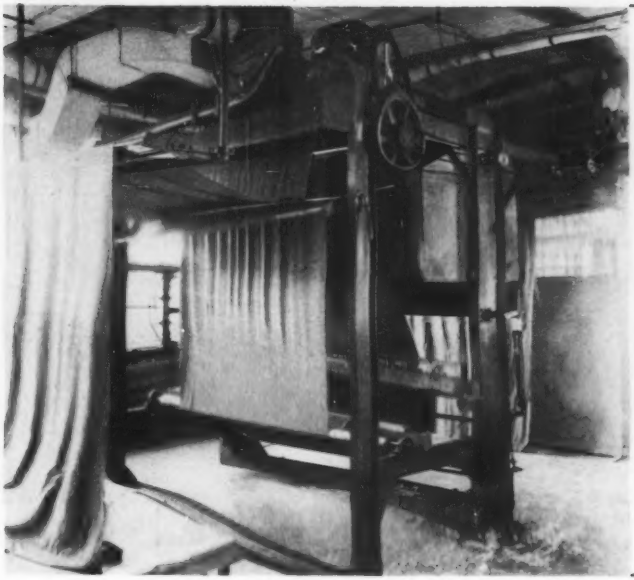

▶ **Gabardines and similar types of fabrics require a perfectly smooth and fuzz-free surface on the finished cloth. Singeing is a process for burning off the fuzz or projecting fibers from the cloth surface and is usually performed on gray goods before wet finishing. Gray-singeing is frequently used in place of gray-shearing and is said to give a clearer surface than that obtained by shearing.**

HIGH-SPEED SINGEING
Gives Smooth, Clear Finish

HIGHLIGHTS: *Singeing speeds of 100 yd. per min. give desired finish at Bachmann Uxbridge Worsted Corp. Reliable gas and air controls give uniform production with economical, trouble-free operation.*

By E. H. HELLIWELL, *New England Editor, TEXTILE WORLD*

NEW SINGEING EQUIPMENT now in operation at Bachmann Uxbridge Worsted Corp. plant was designed, engineered, and installed by Dudley, Garland & Jensen, Inc., Cambridge, Mass. This machine can process worsted, woolen, and blended fabrics at a speed of 100 yd. per min. The complete set-up consists of two Red Ray radiant burners, two Hi-Flo blowers, two Flo-Mixers, and one Bryant gas regulator. Ventilating equipment and a ceiling folder at the delivery end are also included.

RADIANT-RAY BURNERS. Each radiant burner consists of eleven 7-in. sections mounted on a common manifold. Fuel mixture is delivered to each section individually. The proper distribution of gas and air-mixture is maintained throughout the length of the burners. The width of the burner is 5½ in. [In practice, any number of the 7-in. sections can be connected together for a continuous burner of any desired length.] A filter with a replaceable unit is included. Burners are so mounted as to permit automatic removal of the cloth from the action of the heating rays when the machine is stopped.

Bryant Hi-Flo blowers provide the low-pressure air needed for combustion in the burners. An impeller gives a smooth and quiet blower. A standard-make 2-hp. motor is used to drive the blower.

A high-capacity pressure mixer gives the combustion system a wide range of operation, according to Bachmann Uxbridge, and reduces its sensitivity to variations in burner characteristics.

OPERATING ECONOMIES. The substitution of singeing at Bachman Uxbridge for one or more gray-shearing processes has permitted a saving in operating costs. A singeing production of 100 yd. per min. compares well with about 35 yd. per min. for a gray-shearing machine. In addition, the mill has found skilled shear-tenders are required for the shearing operation, while unskilled labor at a lower hourly rate can take care of a singeing machine.

Purchase and installation costs are comparably low for the singeing machine. Sufficient figures on this new singeing installation at Uxbridge have not yet been made available for detailed comparison of maintenance costs, but maintenance costs are also believed to be low. The thermal efficiency of the burners and accurate control of gas and air mixture have given economy in gas consumption that otherwise might be excessive.

In producing hosiery that wins approval of your expert eye and proves a shopper stopper in retail stores, Monsanto Santomerse No. 1 is a valuable assistant. Santomerse No. 1, the all-purpose detergent and wetting agent, aids in level dyeing, prevents spotting by metallic curds, helps keep bright colors brilliant. It is used in scouring and penetrating of nylons, acetates, cottons and silks, even when different fibers are knit together.

Santomerse No. 1 is an alkyl aryl sulfonate, with a minimum of 40% active ingredient. Santomerse No. 1 is a rapid wetter and penetrant and a highly efficient detergent.

Santomerse No. 1 rinses out quickly and thoroughly. It is efficient in hard or soft water, in hot or cold solutions, in acid or alkaline baths.

For information on the use of Santomerse No. 1 in hosiery mills . . . or in any textile business . . . contact the nearest Monsanto Sales Office or write MONSANTO CHEMICAL COMPANY, Phosphate Division, 1700 So. Second St., St. Louis 4, Mo.

DISTRICT SALES OFFICES: Birmingham, Boston, Charlotte, Chicago, Cincinnati, Cleveland, Detroit, Los Angeles, New York, Philadelphia, Portland, Ore., San Francisco, Seattle. In Canada, Monsanto (Canada) Ltd., Montreal.

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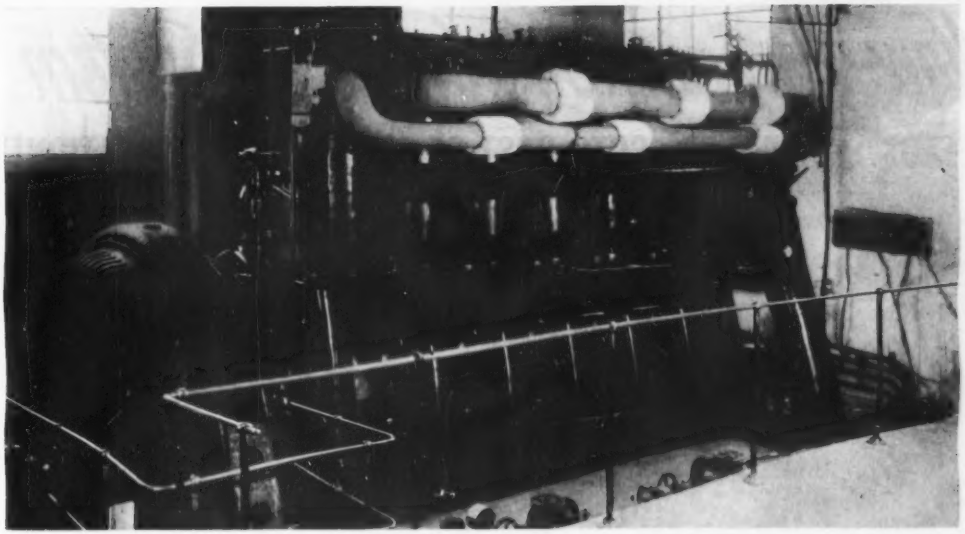


THIS 750-BHP. DIESEL generates electricity to run Sennhof Cotton Mill. Cylinder fumes are transferred through the insulated pipes to a boiler. Hot water from the boiler is used for space heating.

Diesel Waste Heat Used by Swiss Mill

- ***Diesel engine-generator set runs and heats a cotton mill and part of a mill village.***
- ***About 76% of the total heat in the fuel goes into electricity and space heating.***
- ***Engineers call the system "about as good as you can do."***

ABOUT 76% OF THE POSSIBILE HEAT in diesel-engine fuel is put to good use at Sennhof Cotton Mill, Winterthur, Switzerland. About 36% of the fuel heat is converted to electricity to run the mill, and about 40% is used for space heating.

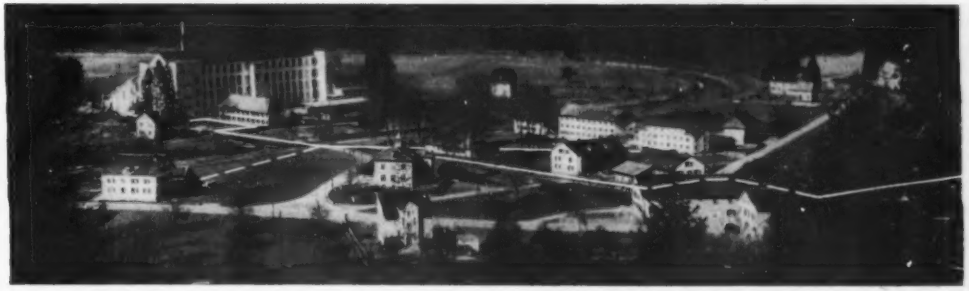
Installed by Sulzer Bros., Winterthur, the system makes use of heat from the cooling water and the exhaust fumes. These sources heat water for the hot-water heating system.

Besides the mill itself, space heating is provided for a canteen; two houses, with a total of 66 rooms, occupied by women workers; and a number of private flats.

Plans now are to extend the pipe system to provide most of the heat needed by 50 other flats. In extremely cold weather, an auxiliary boiler will be needed after this extension of the system is made.

Sennhof reports that this combination of heat and power generation is particularly economical in an area where fuel costs are high.

The 76% heat efficiency, diesel-engine men in the United States report, is good operation in any installation.



***HOT-WATER HEAT** is provided for the mill, at the left, and village buildings as connected by the white line. The line traces the course of the underground hot-water pipes.*

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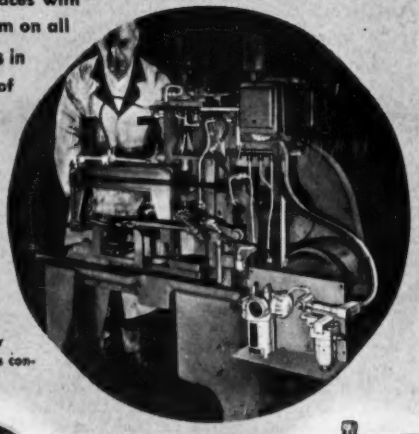
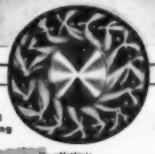
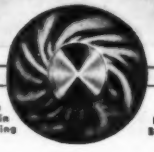
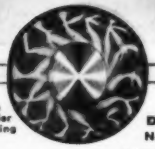
Fully automatic—eliminates waste and the uncertainties of the "human element." Extends bearing life as much as 17½ times. Seals bearings against dirt and abrasives. Cuts oil consumption as much as 90%. Greatly reduces the number of oils needed.



Eleven points on this automatic electric saw are served by Oil-Mist. Flexible lines carry lubricant to reciprocating and oscillating parts . . . condensing fittings apply liquid oil to a cam and roller . . . a spray fitting sprays oil on a drive chain, gear and sprocket. The lubricator is controlled automatically by the machine switch.







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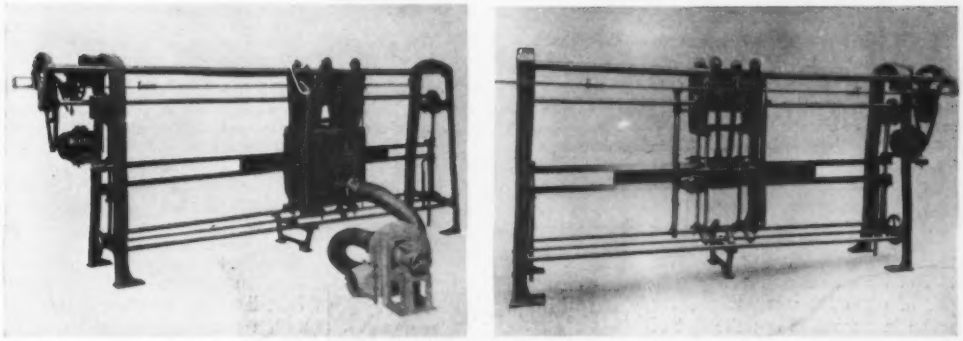
TEXTILE Equipment NEWS

Automatic Machine Cleans Reeds and Heddles



REEDS AND HEDDLES can be cleaned quickly and automatically by this machine available with (left) or without (right) a dust collector. Reeds can also be honed.

A new reed- and heddle-brushing machine designed to clean, hone, and polish reeds and clean and polish heddles is available from H. J. Theiler Corp., Whitinsville, Mass. The Swiss-made machine, called the Robot, is said to clean heddles while they are in the harness frame.

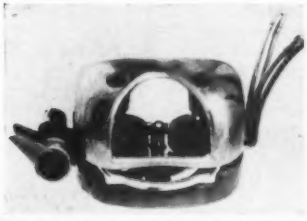
Each machine is supplied with one pair of horse-hair brushes, one pair of bronze brushes, and a special honing attachment. The horse-hair brushes are used for cleaning average dirty reeds and heddles. The bronze brushes are used for cleaning rusty reeds and heddles. These brushes are said to remove rust quickly without damage to heddles or reeds.

The honing attachment is used for polishing slightly damaged reed dents and for removing shuttle marks. The two brushes move up and down and traverse the whole reed or harness frame. The fast revolving action of the brushes removes dirt between the dents and at the same time polishes the rough spots.

Reeds or harness frames with heddles can be mounted in the cleaning machine within a few seconds. After the starting button is pushed, the machine cleans the reeds or the heddles automatically and stops after the predetermined number of traverses.

The cleaner is fully adjustable. The brushes can be set either to move up and down together or so that one brush will move up while the other brush is pulling down. The vertical motion is adjustable from zero to about 16 in. A dial at the end of the machine can be set to predetermine the number of horizontal traverses. The machine can be operated by an inexperienced male or female operator.

Tension Cleans Dirt From Yarn



A WHEEL in this tension device with raised surfaces and slotted disks that exert a rubbing and rolling action on yarn is said to be helpful in removing dirt from yarn made from low-grade cotton.

A new type of self-cleaning deadweight tension designed primarily for use in processing "dirty" yarn made from low-grade cotton has been developed by Muschamp Taylor Ltd., Vulcan Works, Pollard St., Manchester, England.

The tensions contain a freely rotating wheel in which three slots are cut. Through these slots drop the seeds and fly released from the yarn, under the action of the tensioning arrangement, that would otherwise accumulate and prevent the proper functioning of the device.

The outer rim of the wheel is raised slightly, as is the central boss or "hub." The normal type of deadweight disks are used to exert the necessary tension on the yarn, and these are mounted on two suspended vertical posts so as to bring them into contact with the wheel. The disks rest on the raised outer rim and the raised central boss of the wheel, and the yarn passes between these surfaces of the wheel and the tension disks.

The yarn is in contact with the raised surfaces of the wheel at four points. This multi-contact is said to provide not only a thoroughly efficient and controlled tension, but also to

have a definite cleaning effect on dirty yarns.

In its path through the self-threading tension, the yarn passes through a vertical V-guide and then under the first set of disks and against the pillar that carries them. It then passes over the center boss of the wheel to the second set of disks and is again brought into contact with the supporting post.

In addition to the correct tensioning of the yarn, these four pairs of edges have an action designed to be helpful in the ejection of the seed. As the yarn passes through the tension, the first pair of edges encountered—the outer edge of the wheel and the lowest of the tension disks—causes a rubbing action across the yarn. The second pair of edges encountered—the inner edges of the wheel and disk—creates a rolling action of the yarn that is caused by the fact that the two pair of edges move in opposite directions. The third pair of edges encountered by the yarn also has a rolling action, but in a direction opposite that of the second pair. The fourth pair of edges has a parallel rubbing action in a direction opposite that of the first pair.

As the yarn is brought into contact with the vertical posts which locate the two sets of disks, it receives a further cleaning action. Any seed ejected by the operation of the tension falls through the slots in the wheel and can, if necessary, be retained in a special receptacle provided for the purpose.

Glass-Block Improvements Speed Cleaning, Installation

CLEANING of glass-block panels is now simple and easy because of a new finish applied to exposed faces of the block during manufacture.

A GOLD STRIPE (arrow) on the top mortar-bearing edge now makes it easy to lay Insulux light-directing glass block.

Two improvements to reduce installation time and costs for Insulux light-directing glass block have been announced by American Structural Products Co., Ohio Bldg., Toledo, Ohio, an Owens-Illinois subsidiary.

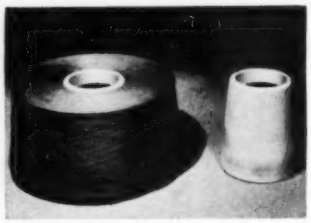
The first improvement is a new finish applied to the exposed faces of the block during manufacture. Being water-repellant, the finish prevents adhesion of mortar to the faces during the laying operation and means easier and faster cleaning of panels. The new finish eliminates the need for the strong acids commonly used for cleaning masonry work.

Job tests conducted by contractors in various sections of the country show that shorter cleaning time reduces the total installed cost of glass block by a substantial margin.

The second improvement is an electronically applied gold stripe which now appears on the top mortar-bearing edge of each block. The stripe makes it easy to lay block in the correct position. In order to function properly, light-directing glass block must be laid with a certain side out and a certain edge up. If all blocks in one course have been installed properly, the gold line will be unbroken. A broken line indicating improperly installed block can quickly be detected.

Blocks are inspected and striped automatically at the plant by an electronically controlled machine. The possibility of human error is thus eliminated.

Foster 102 Now Winds Cones for B-C Creel



SLIGHT-TAPER CONES to fit a Barber-Colman creel can now be wound on the model-102 winder by use of an attachment for the winder developed by Foster Machine Co., Westfield, Mass. Package-dyed yarns can be wound at speeds up to 715 yd. per min. with 4-in. traverse. The new equipment is said to be especially effective in handling fine-count yarns from 50s to 80s. The cone produced is 4 in. in diameter at the base and will hold up to 3 lb. of yarn. The cone is said to be free of ribbon wind and to draw off easily in the creel.

Electric Brake Improves Warper Operation

A new series of electric brakes and clutches especially designed for use on high-speed warpers has been developed by Warner Electric Brake & Clutch Co., South Beloit, Ill.

Use of the new electric brake is said to offer these improvements in the warping operation:

1. The warper can now be stopped almost three times as fast as formerly, so that loss, tangling, and snarling of yarn ends are avoided. It is possible for the operator to repair yarn breaks faster than before.

2. Skidding of the yarn is virtually eliminated.

3. The simplified brake system requires no adjustment for wear, with the result that maintenance expenses are reduced.

In contrast, the electrically-operated system is a self-synchronizing unit and requires only simple dial settings.

Uncurler for Loopless-Toe Hosiery Improves Quality

A new uncurler that has been specially designed for handling stockings seamed by the "loopless-toe" method is now being produced by Union Special Machine Co., Chicago, Ill.

The new uncurler, in addition to offering all the features of previous uncurlers, has been designed with a double-prong extension at its delivery end that enables the stocking to be carried farther into the feed cups than is usually possible. This design eliminates the need for the operator to pull on the stocking when starting it into the machine and also prevents any possibility of the stocking being disturbed after it has once been placed properly in the uncurler.

While designed specifically to overcome the difficulties of seaming "loopless-toe" hosiery, the new uncurler works equally well for conventional-type looped hosiery.

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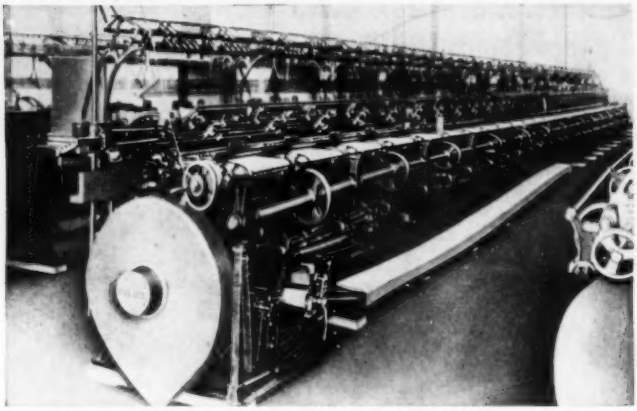


THE TEXTIMA FULL-FASHIONED KNITTING MACHINE, with an automatic welt turner, was one of many improved machines shown at the Leipzig Fair.

Latest German Knitting Machines Shown at Leipzig

Modernized versions of German full-fashioned-knitting machines familiar to hosiery manufacturers in pre-war years were shown at the recent Leipzig Fair. A large number of the machines are now marketed by a company known as Textima that is represented by Muschamp Taylor Ltd., Vulcan Works, Pollard St., Manchester, England.

One machine shown was the Type FSW-1 full-fashioned-knitting machine, a 24-section, 51-gauge unit with automatic welt turners. The standard unit will be built with 28 sections. This machine was built by Schubert & Salzer and was making Perlon stockings.

The time taken for a complete set was 33 min. at a speed of 80 courses per min. in the welt and leg and 60 courses in the spliced portions of the hose. Operation is fully automatic, and the welt-turning operations imitate exactly those of the operator turning a welt by hand. The welt is turned on every needle. All automatic movements are controlled by a jacquard card set in motion by studs on a course-counting chain.

The machine has cams suitable for the new fibers, provision for ten thread carriers, an improved shock-absorber system, and central controls.

The Textima Ideal links-and-links double-cylinder machine was shown producing men's half hose. This is a machine, built by the firm previously known as G. Hilscher, that follows the lines of the British double-cylinder machines. It is made in diameters from 2¾ to 4¾ in. with needles from 5 to 18 per in. Another single-cylinder machine was also shown, and it was stated that this model would be supplied in various gauges on up to 26 needles per in. A rib-top machine with automatic feed for elastic was also on display at Leipzig.

In addition, Textima exhibited a new interlock machine with positive dial drive, mechanism for making tuck-stitch effects, feed wheels, and electric stop motion.

Another firm, Seyfort and Donner, now also in the Textima group, showed a comprehensive range of hand and power flat-knitting machines, including simple hand flats, hand flats with long- and short-butt needles for rapid change from 2-and-2 to 1-and-1 ribs, power flats with jacquard control of the cam positions for racked cardigan fabrics, and power machines with jacquard selection of the needles for color designs.

Among the industrial sewing and seaming machines shown at Leipzig were the Kohler linkers and cup seamers on individual stands. Two- and three-thread overlock machines, single- and twin-needle lockstitch machines, and a full range of double chain-stitch machines for flat seaming of underwear and outerwear were also exhibited.

The machines mentioned above were all shown on the stands of the Textima group. Another exhibitor, Sachsische Stickautomaten-fabric, Dresden, Germany, showed a three-head automatic embroidery machine with jacquard control capable of making attractive designs on fabrics held by tambour rings.

An interesting jacquard warp-knitting loom with bearded needles was displayed by Wirkmaschinenfabrik Apolda. The jacquard is placed over the machine and controls, by cords and springs, the sideways pressing of special types of thread guides to make patterns on floral or symmetrical lines in openwork effects.

Wirkmaschinenfabrik also showed two latch-needle Raschel-type looms, one of 30 gauge working elastic fabric, the other of coarse gauge working a coarse net with designs made with "filling-in" threads. These fabrics were designed for use as curtains, tablecovers, and general furnishings. On these machines, the old system of needle-bar control—the cam shaft and piston—has been replaced by a short lever motion giving the needle bar a slight "arc" movement.

Two machines of the lock-knit type with speeds of 450 to 500 courses per min., as well as a machine for the production of this class of fabric, were exhibited by Emil Wirth. The warp loom was runing at 900 courses with the standard sinker movement, but was designed so that the thread guides did not swing through the needles. The guides made only the sideways movement; the needles took a figure-eight path and passed between the guides to obtain their threads. Hydraulic principles are used to drive the warp let-off, and the machine was working without trouble at this speed.

The firm of Ruma Veb showed a circular rib machine for heavy tuck-stitch designs in which the needle set out and cam-movement control determine the pattern. The machine produces plain rib stitch for the waist part of the garment. The same firm also had on display its universal jacquard circular-rib machine that has a master jacquard on one side of the machine that controls, through cables, the position of the cams acting on the needle packs. The advantage claimed for this system is that very large design areas in three-color effects are obtained.

Both machines shown by Ruma Veb are equipped with feed wheels for the yarns. The feed wheels are tapered so that the thread-guide changes its position according to the amount of thread being used. Electric stop motions are fitted as standard to these machines.

Chemnitzer Strickmaschinenfabrik A. G. showed a jacquard machine with twelve feeds, with the needle selection of each feed governed by steel jacquard tapes as the machine cylinder revolves.

Claimed to be the first electric-jacquard flat machine, a model built by Elite-Diamantwerke Aktiengesellschaft attracted attention at the exhibition. Two models were shown, one double system and one treble system, with a jacquard at the end of the machine and a number of electric solenoids over the cams and thread-guide-selecting mechanism.

Proper Balance

In Textile Spring-Beard Needles, it's the careful balancing of needle resiliency and needle length that assures superior knitting results. At every stage of production, Textile Needles are constantly checked for proper balance.

Balance is just one of the many advantages you get from Textile's scientific controls—automatic and electronic. Textile Needles are right at every point, in every detail.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile
SPRING-BEARD NEEDLES
For Full Fashioned and Warp Knitting

Automatic Winder Has 10,000-Rpm. Speed

A DRUM on this winder guides yarn onto the bobbin. Build is controlled by a contact disk. Bobbin changing takes 1½ sec.

A new, fully automatic bobbin-winding machine said to have a spindle speed of 10,000 rpm. has been developed by Schlafhorst, Muenchen-Gladbach, Germany.

The machine is said to be simple in design and to have been fitted with a streamlined case and magazine-type creel. Yarn passes from the cone through a double tension device and a special guide connected to a rotary traverse. This traverse works on the grooved-drum principle. It comprises a practically solid drum with a groove that guides the yarn up to the apex of the yarn layer on the bobbin. The drum has been provided with a specially machined return groove, which is designed to insure a quick return of the yarn at the nose end. This groove also tends to exert a certain amount of additional tension.

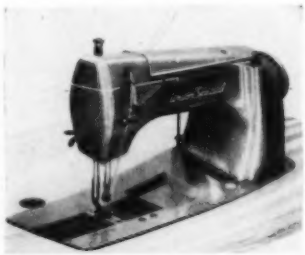
Thus, it is claimed, the additional tension is effective in counteracting any tendency towards sloughing.

When the bobbin is full, it is released and drops into a reception tray, where it is held until the empty bobbin has been inserted. Not until the new bobbin has started winding does the full bobbin drop into the main receptacle. The change cycle takes about 1½ sec., and winding is said to start again at full speed.

The machine is built on the single-spindle principle. The change mechanism is operated by a set of independent cams that are easily accessible.

A light feeler disk contacts the winding diameter during the formation of each layer of yarn. This feeler disk gradually displaces the rotary guide, and the bobbin is formed in the normal way. It is stated that the feeler disk is extremely sensitive and can cause no harm even to the most delicate yarn.

New Needle Feed Lockstitch Machine Available



BOTH LIGHT AND HEAVY WORK can be handled by this new Lockstitch machine.

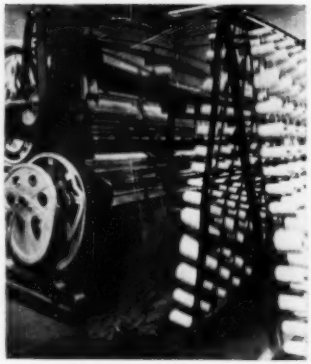
Two new classes of needle-feed Lockstitch machines, a single-needle machine identified as Class 61800 and a two-needle machine designated as Class 62200, have been developed by Union Special Machine Co., Chicago, Ill. Both machines produce stitch type 301 and are being produced in styles suitable for use on light- and heavy-weight work.

Streamlined in design, the new machines are constructed with vertical-type hooks. Separate oil reservoirs are provided for each hook and for the main gear case from which lubrication is automatically supplied for the entire lower mechanism.

The hook and hookshaft have been designed so that the removal of the hook does not require retiming or resetting of the hook point when it is replaced in the machine. The hook mechanism also contains a mechanical opener.

Pressure of the presser foot is applied by an enclosed coil spring and is adjusted by a readily accessible thumbscrew. The presser foot lifter mechanism is enclosed, as are the thread controller and tension disks.

High-Speed Net Machine Developed in England



THE PORLESTER NET MACHINE is largely automatic, it is claimed, and can be operated by one person.

A new, high-speed, power net machine has been developed by Porter Spiers (Leicester) Ltd., Peckleton Common, near Earl Shilton, Leicester, England. The machine is said to be capable of producing the type of camouflage netting specified by the U. S. Army.

The machine is able to tie knots at a running rate of 5,000 to 6,000 per min. Widths of 5, 10, 15, 20, 25 and 30 score, with shuttles numbering 101, 202, 303, 404, 505, and 606 respectively, are available.

20-Kw. Generator For Dielectric Heating

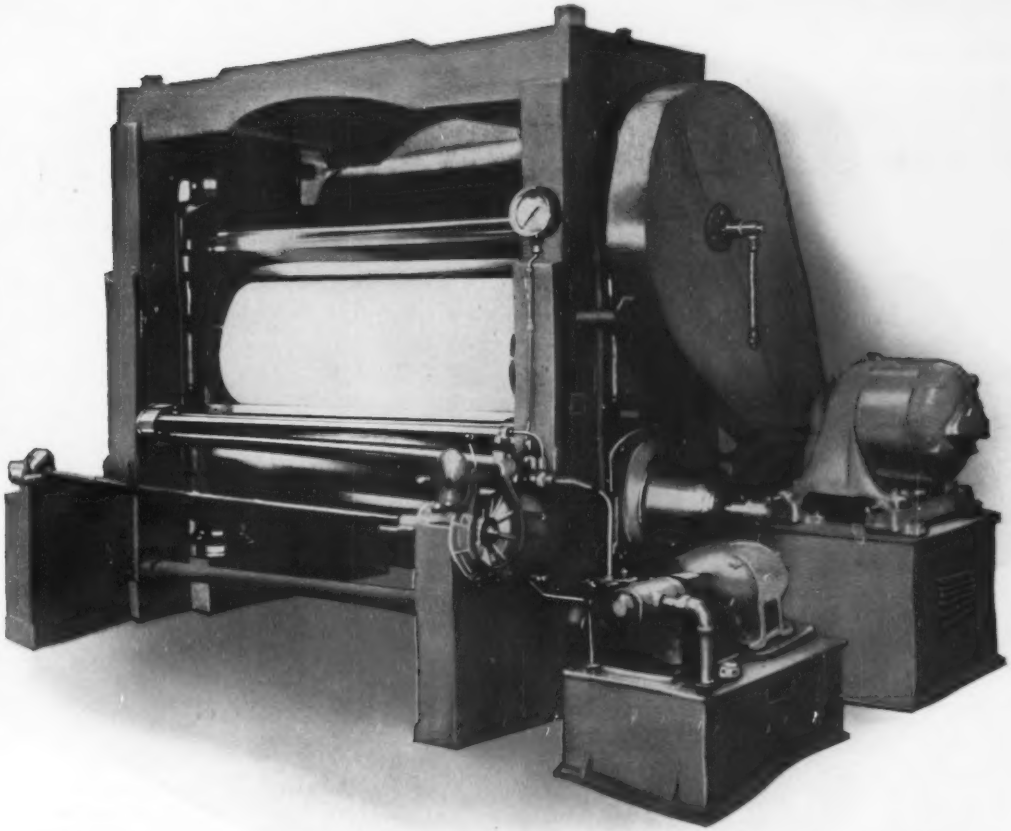
A new 20-kw. radio-frequency generator for dielectrically heating textile materials is available from Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa.

The generator is readily adaptable to batch or continuous-production methods. It delivers rated power at a 100% duty cycle, in accordance with NEMA standards.

Operating controls are held to a minimum. All adjustments necessary for operation of the equipment are made from the front panel. Built-in load coupling and tuning elements permit maximum transfer of power into a wide range of loads by front panel control.

Pushbutton control, stepless adjustment of output power, and a complete complement of protective devices are said to put operation of this equipment on a semi-skilled basis.

The enclosure is designed to minimize radio-frequency radiation.



RUGGED DEPENDABILITY

Nowhere does massive sturdiness pay off in satisfaction more than in a heavy-duty calender. The V.V. 80 Ton Hydraulic Calender is well known to the trade for its rugged dependability. Here's why:

In design, workmanship and materials nothing has been overlooked. Heavy cast, box section frames are connected to cast iron and steel cross girts with close fitting, machined faces. Bearing guide slides for calender roll are machined for correct working surface.

Top and bottom rolls are chilled iron 16″ and 20″ in diameter—turned, ground and polished. Both are bored with chambers for steam heating. Intermediate roll, 22″ in diameter, is of selected, seasoned and bonded cotton, pressed on hammer-forged steel shaft with hammer-forged steel heads.

Bearings are heavy duty, spherical, roller type.

Lubrication is by a circulating oil system, giving a continuous flow from reservoir through bearings to pump and filtering unit, back to reservoir.

New design, using piston rings instead of packing, eliminates down time for repacking. Piston diameter has been enlarged to maintain 80 ton nip pressure with only 770 pounds per square inch oil pressure instead of 2000 pounds as previously required.

Totally enclosed, two stage hydraulic pump is directly connected to motor. Extremely large self-aligning spherical roller bearings mean a great saving of power, enabling a 25 h.p. motor to supply ample power to drive the machine at 75 yards per minute. Standard widths are 65″ and 70″.

VAN VLAANDEREN

You are invited to see this machine.

MACHINE COMPANY

370 Straight Street, Paterson 3, New Jersey

Cable address: VLAANDEREN, Patersonnj, U.S.A.

World's largest manufacturer of machines for processing modern fabrics

Unit Substation Permits Savings in Cable

COMPACT UNIT SUBSTATION, the Inductrol Power Pack, has a 15- to 100-kva. capacity.

A new "midget" load-center unit substation, specially designed for low-voltage-regulated a.c. lighting and power service in factories and laboratories, has been announced by Unit Equipment Div., General Electric Co., Schenectady 5, N. Y.

Called an Inductrol Power Pack, the unit incorporates in one steel housing an air circuit breaker, a dry-type transformer, and an air-cooled induction regulator.

The new pack, available in either single- or three-phase ratings, has a capacity ranging from 15- to 100-kva., with incoming circuit rates of 480 or 600 v., 60 cycles, and a regulated output at 120/240 or 208Y/120 v.

With these power-regulating units, power can be brought to the load area at relatively high voltage with substantial savings in cable. At the load center, the voltage is stepped down to the value required by the load being served and automatically maintained at that level.

In addition to lighting, the Inductrol Power Pack can be used to regulate the power supplied to resistance-heating and infrared-heating equipment, electronic apparatus, precision instruments, and control circuits.

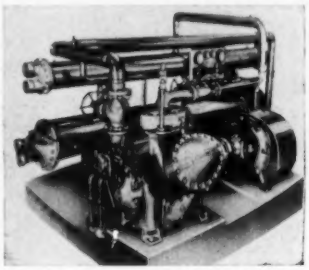
The Power Pack is completely metal-enclosed. It can be installed in any indoor location without the expense of fireproof vaults. Compact and easily installed, the unit can be mounted overhead to save floor space.

Refrigeration Unit Designed for 100- to 150-Hp. Range

Two models of reciprocating refrigeration machines specifically designed for air conditioning and refrigeration use in the 100- to 150-hp. range have been announced by Carrier Corp., Syracuse, N. Y. After having been thoroughly field tested, the machines are now being produced in quantity.

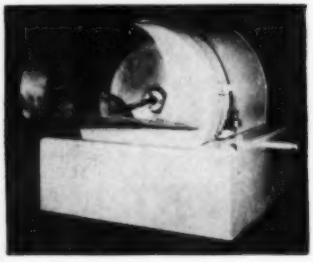
The reciprocating machine—designated as the Carrier 30B—is furnished as a complete package with compressor, cooler, and condenser, with all interconnecting piping, fittings, safety and capacity controls, gauge board, and cooler and condenser stands included. Pre-engineering is said to assure precise matching of components for maximum operating efficiency and economy. Compactness of assembly, provided through special design of pipes and fittings, is said to reduce pressure loss to a minimum, guarantee better over-all performance, and permit a wide range of applications where space is critical. The machine is particularly suitable for chilling water for air-conditioning purposes, and is readily adaptable to many industrial requirements, including direct product cooling, brine chilling, and ammonia and chlorine condensing.

The heavy-duty reciprocating compressors used in 30B models are part of Carrier's standard list of reciprocating units. This list includes compressors ranging in size from 3 to 200 hp. Four- and six-cylinder compressors of the type built into the new machines may be obtained as separate units for use with either Freon, ammonia, or Carrene-7 refrigerants in 75- to 200-hp. applications.



COMPACTNESS and high operating efficiency are features claimed for this new refrigeration unit.

Humidifier Is Self-Contained



STANDARDS PARTS are used in manufacture of this humidifier, a factor that is said to contribute to lower cost.

A new industrial humidifier, the IMPSCO, is now being made by the Industrial Materials Purchaser Co., 401 Broadway, New York, N. Y.

The new humidifier requires no ducts, no pumps, no compressed air, and no steam lines. Each unit is a complete system in itself and only requires a water feed line. No return water line is necessary. The vapor is emitted in an extremely fine mist-like form.

The humidifier works on the principal of atomization through centrifugal force. The manufacturer claims that this system produces the finest vapor at the lowest cost for equipment, installation, operation, and maintenance. Another big saving claimed is that all parts are of standard manufacture and do not require special factory repair and replacement. The only part that is said to require regular replacement is the Fiberglas filter over the air intake, and the filter used is one purchasable through any supplier of air-conditioning equipment.

The use of standard parts is said to make the humidifier cost about one-third less to manufacture than somewhat similar types of humidifiers on the market today and allows the unit to be sold to the consumer at a correspondingly low price.

A few of the physical details of the new humidifier are as follows:

1. Vaporization capacity: 1 gal. per hr.
2. Weight: 50 lb.
3. Dimensions: 12 in. wide, 14 in. high, 22 in. long.
4. Water supply is used from ordinary drinking-water mains at regular pressure.
5. Vapor is emitted in just one direction so that the units can be mounted on the walls, corners, or supporting posts of a factory or mill.
6. Motor: ¼-hp., 110-v., 60 cycles.

The Dayton Thorobred Pickers

Here are the two outstanding pickers on the market today —the regular Dayton Thorobred Picker, and the red-headed Super Picker. Since their introduction, extensive mill service has proved what field tests showed: that these pickers consistently outlast other makes, often by as much as 2 to 1!

Both incorporate improved design features, such as rounded front edges that eliminate hanging filling; narrow back that permits free non-wear on lay-in strap; flared bottom that makes picker stick easier to apply. Because they outlasted others two to one, they often cut down-time in half, increased cloth production. Made shuttles last longer, too, because the pickers run cooler. Can be used for high-speed and standard speed looms.

The Super Picker is one of the finest pickers in the world today, and will outpick any ordinary picker on the market.

Pick of the peach crop *are the young women that fill out the bathing suits and other wearing apparel that Dayton products help manufacture.*

DAYTON RUBBER COMPANY, DAYTON 1, OHIO

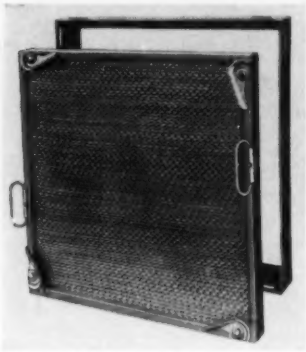
THE GREAT "BIG LUG"

This is the lug strap—the Dayton Thorobred Deluxe—that in recent tests reported with three other types of strap, outlasted every one. Built-in cushion protects cam points and picker sticks. Unaffected by temperature and humidity changes.

Dayton Rubber

TEXTILE PRODUCTS FOR BETTER SPINNING AND WEAVING

Filter Cleans Air at Velocities Up to 500 Fpm.

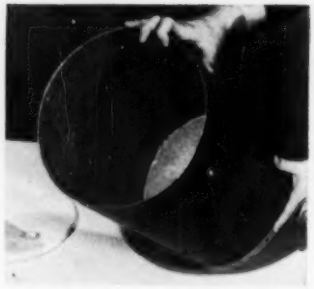


CORRUGATED STRIPS of fine mesh wire that form pyramid-shaped pockets in this new filter can be cleaned in washing tanks or washed out with a hose. The unit is easy to service or recondition.

A new, high-velocity unit air filter, the American type HV, has been introduced by American Air Filter Co., Inc., Louisville, Ky. The filter is made of corrugated strips of fine mesh wire. The corrugations in the strips taper so that when two strips are placed together they form a series of pyramid-shaped pockets. The small ends of the pockets are closed to the air flow to eliminate any open air passages through the media.

These filters are designed to operate at velocities up to 500 fpm. and maintain a uniformly high cleaning efficiency over a wide range of air velocities. They can be serviced in the conventional way with washing and charging tanks, or they can be reconditioned by washing out the accumulated dust with a hose and spraying with filter adhesive.

Coated Shipping Drum Holds Moisture in Products



SHIPPING DRUMS made of fiber and coated on the inside with geon latex are available from Virginia Barrel Co., Chester, Pa. The coating is said to protect products from grease penetration and to prevent loss of moisture content during shipment.

Rotary Brush on Sweeper Cleans Up to Wall

A NEW ROTARY BRUSH for cleaning floors right up to the wall and for cleaning in corners has been added to the floor sweeper made by Parker Sweeper Co., 91 Bechtel Ave., Springfield, Ohio. Sweepers are made in 20- and 28-in. sweeping widths.

Pneumatic Shuttleless Loom Developed in Sweden

A pneumatic shuttleless loom in which the filling is inserted by an air current is said to have been successfully developed by Max Paabo, Norrkoping, Sweden.

The shuttleless loom is reported to have been demonstrated to the Society of Swedish Inventors, and ten looms are said to have been built for a mill in Norrkoping.

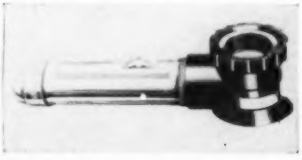
The loom is reported to weave quickly, smoothly, and almost noiselessly. Speed is said to be double that of a conventional loom, and cost is claimed to be lower than that of standard-type looms.

According to the report, one weaver can handle 40 looms, and battery filling is eliminated.

Table Truck Has Hard Maple Top

A NEW MAPLE-TOP TABLE TRUCK, available with casters or legs, is being made by Market Forge Co., Everett Sta., Boston 49, Mass. The top is made of 2-in. hard maple, jointed true and glued. Finish is natural wood, and bolts are concealed. The unit is 48 in. long, 30 in. wide, and 31 in. high.

Illuminating Magnifier Improved



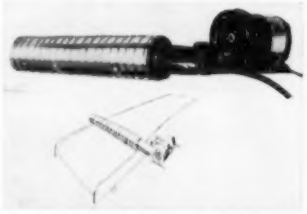
MAGNIFIERS complete with light are available in 7- to 40-power models. They incorporate a lens system that gives clearer vision.

An improved Flash-O-Lens combined magnifier and light has been announced by Abbeon Supply Co., 58-10 41st Drive, Woodside, N. Y.

The instrument combines a seven-power magnifying glass with a powerful light built into the handle that illuminates the magnified field of vision without throwing direct rays in the user's eyes. The device is light and portable so that accurate inspections can be made even in dark places.

In this model, a new Bausch & Lomb lens system has been incorporated to give a clearer, flatter field of vision and to reduce distortion and aberration. The housing for the lens system is now made of Bakelite plastic to give a 275% increase in strength over former models. The case is made of steel with a hard industrial-chrome finish.

Blower Available For Drying, Preheating



PRE-HEATING OR SUPPLEMENTARY DRYING of textile materials can be done by this blower that releases air at 400° F.

A new electric-heat blower unit for drying or preheating materials has

In modern air-liners you breathe comfortably at altitudes of 25,000 ft., because your cabin is "Pressurized" — air pressure inside the plane is kept at or near normal sea level pressure.

Boilers, too, "breathe" easier when their combustion air is "pressurized" using forced draft

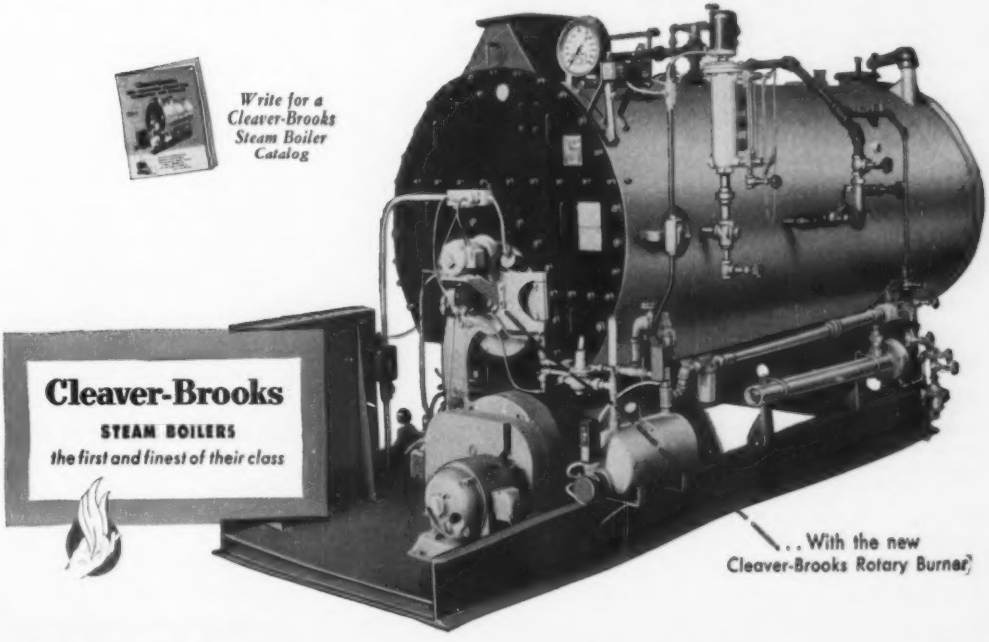
Cleaver-Brooks experience with thousands of steam boilers, of the self-contained type, has conclusively proven these operating advantages of forced draft:

- — because atmospheric boiler-room air is constant in temperature and therefore in density, the weight of air delivered for combustion by a forced draft fan is also constant and always gives proper air-fuel ratio (CO_2) resulting in maximum efficiency and freedom from combustion problems.
- — the electrical load, or power requirement, of a forced draft fan is at a minimum, because the fan handles a lesser volume of air.
- — low fan maintenance and longer fan life with forced draft fans since they operate with cool, clean boiler room air — no problems with high bearing temperatures and corrosion.
- — air is under pressure in the combustion chamber of a forced draft boiler, with no possibility of "diluting" air entering the chamber. Maximum boiler efficiencies are always attained when head plates and casings are tight.
- — lower initial fan cost, better space arrangement, and better appearance are gained because forced draft fans are considerably smaller.
- — casings for forced draft fans are cool — require no insulation — contribute to safer operation and cooler boiler rooms.

Forced draft is one of many reasons why you get a greater return from your investment in a Cleaver-Brooks boiler — a boiler of foremost quality in every detail and with many immediate and long-range cost-saving features. Cleaver-Brooks self-contained boilers are available for oil, gas, combination oil and gas firing — 15 to 500 hp., 15 to 250 lb. p.s.i.

CLEAVER-BROOKS COMPANY
370 E. Keefe Ave., Milwaukee 12, Wis.

Write for a Cleaver-Brooks Steam Boiler Catalog



 For more information, write direct or use Reader Service post card.

been developed by Master Appliance Co., Racine, Wisc.

Heated air is blown from an opening 4 in. wide and 36 in. long. The air is heated to 400° F. and is forced out at 400 fpm. Even temperatures and pressure are said to be achieved throughout the length of the blower.

The heat blower operates on 220 v. and draws 40 amp. Air supply is developed by an electric-motor-driven blower. Heat is developed by electrical heating elements.

Other sizes of heat blowers with various capacities are being developed by the company.

Surface-Active Agent Has Excellent Stability

A wholly synthetic anhydrous non-ionic surface-active agent, Igepal CO Extra High Conc., has been announced by General Dyestuff Corp., 435 Hudson St., New York 14, N. Y. This product is in liquid form; contains 100% of active material; and is said to possess outstanding properties as a detergent, wetting agent, emulsifying agent, and dispersing agent. It is said to have excellent chemical stability and to retain its activity in the presence of acid and alkali, as well as in the presence of metallic salts found in very hard water.

Here are some of the properties of Igepal CO Extra High Conc.: ready solubility in water; no effect from hard water and metallic salts; resistance to acids and alkalis; neutral in reaction; excellent detergent and scouring properties for cellulosic, synthetic and animal fibers; excellent wetting properties; excellent dispersing properties; very good emulsifying properties; nonelectrolyte; cannot form salts; good foaming properties; and excellent chemical stability, including stability in storage.

Polyacrylic Acid Size Solves Nylon-Sizing Problem

A polyacrylic acid formulation, Acrysol A-1, has been developed by Rohm & Haas Co., Washington Square, Philadelphia 5, Pa., to solve the main problems presented in the sizing of nylon. Acrysol A-1 is said to have excellent affinity for nylon and at the same time exhibit the other characteristics needed in a warp size.

The material is applied from water solution, and the films which are formed are described as tough and flexible. The manufacturer states that the size is readily removed after weaving because the dried film retains the original water solubility of the polyacrylic acid.

Acrysol A-1 is a clear, light-colored viscous liquid containing 25% solids. It is made in two viscosity grades, a high and a low. The solids content is the same in each case; the viscosity is varied by altering the degree of polymerization of the acid.

Sizing formulations are prepared by mixing the Acrysol A-1 with the amount of tap water needed to make the concentration desired. The exact concentration of Acrysol A-1 used depends on the construction of the particular warp that is to be sized, the nature of fabric to be woven, and on other factors in the specific application. Spun yarns, in general, call for higher concentration than filament yarns. Yarns used in weaving commonly need more size than yarns used in knitting. Finer warps require more size than coarser warps.

This size is applied in essentially the same manner as any other. It is recommended, however, that because of the low pH value of polyacrylic acid, non-corrosive materials should be used in the slasher room. On the slasher itself, stainless steel troughs, rolls, and drying cans are the most satisfactory.

Acrysol A-1 is also being recommended for use on highly twisted nylon warps, which are relatively free from abrasion damage in the loom, to prevent excessive soiling during weaving. The dirt is said to be held on the outside of the yarn—on the Acrysol A-1 film—and to be readily washed away with the size in subsequent scouring.

Acrysol A-1 is being tested for use as a size for the newer synthetics. It can be used on acetate rayon under certain conditions.

New Shade Developed For Cotton Printing

A new, bright, bluish-red shade, Calconyl Red B Single Solution, has been developed by Calco Chemical Div., American Cyanamid Co., Bound Brook, N. J. This new red is recommended for cotton printing. It is said to be different in chemical nature from similar color types now on the market. It is an azoic dye available in either single or double solution; and it is reported to assure economy, good printing properties, and a high degree of stability in storage.

New Soluble Vat Color Recommended for Printing

A new soluble vat dye, recommended for printing bright scarlets on cotton or viscose fabrics, has been developed by Calco Chemical Div., American Cyanamid Co., Bound Brook, N. J. The new color, known as Calco Soluble Vat Scarlet HB, is said to produce a clear pleasing scarlet that prints and ages uniformly to the proper shade when applied by the usual procedure for soluble vat dyes.

Calco Soluble Vat Scarlet HB is said to eliminate many matching problems that exist when scarlets are produced by mixing pink and orange. It is said to have good all-around fastness properties, some of which are: light, 4-5; wash test No. 4, 5; chlorine 0.3%, 5; acid perspiration, 5; alkaline perspiration, 5; dry cleaning, 5; hot pressing, 5; plissé printing, 5.

New Textile Softener Has High Substantivity

A new anionic substantive textile fiber softener, Softex 460, is announced by E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa. Softex 460 is said to exhibit excellent softening properties for both cottons and spun rayons and to have high substantivity; it resists removal from the fibers by washing after application. The manufacturer states that its small effect on fading of dyestuffs and the lack of yellowing of white fabrics is outstanding.

The softener is alkaline in nature, and is well suited for package dyeing.

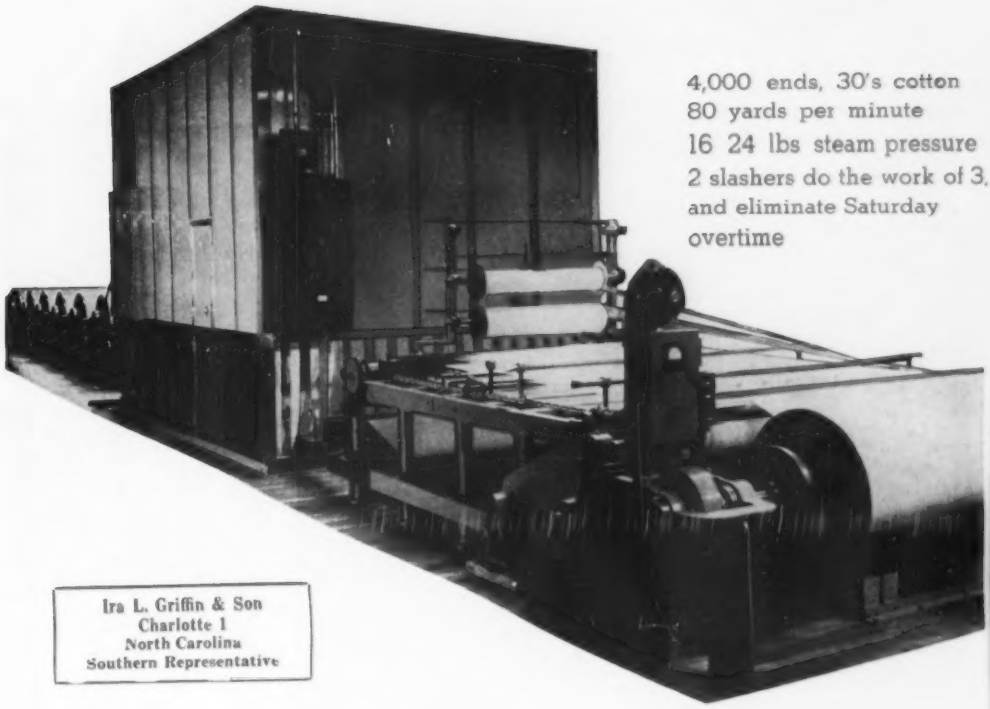
Filament-Rayon Package-Dyeing Is NOT News!

In the headline and lead paragraph of an article in our May, 1951, issue, p. 120, it was implied that filament rayon had just been dyed in packages for the first time.

It was the intent of the article to explain how a Southern mill had package-dyed filament rayon—a process that was new to this mill and that is relatively new in the South.

In the North, Atlantic Rayon Corp., 86 Crary St., Providence, R. I., has been successfully dyeing filament rayon for some 25 years and is doing it today. Over 50,000,000 lb. of filament rayon yarn has been dyed by the company in this period.

Can you do this on YOUR PRESENT SLASHER?



4,000 ends, 30's cotton
80 yards per minute
16 24 lbs steam pressure
2 slashers do the work of 3,
and eliminate Saturday
overtime

Ira L. Griffin & Son
Charlotte 1
North Carolina
Southern Representative

The "Uxbridge Gentle-Air" can, and is doing it for one customer — comparable jobs for many customers.
Thoroughly tested for (5) years under all kinds of operating conditions — slashing wools, cottons, man-made fibers and blends of all three — The "Uxbridge Gentle-Air" can give you more warps and better warps for a lot less than you are paying now, and save your floor space too.

BACHMANN UXBRIDGE WORSTED CORP.
UXBRIDGE, MASSACHUSETTS

Exploring

THE TEXTILE COMMUNITY

By MILDRED BARNWELL ANDREWS

CHRISTIANITY
With Its Sleeves Rolled Up

The industrial chaplain is unique in this industry—there is only one we know of—but he's a man with a simple, basic answer to a multitude of problems, from those of top management on down.

MILDRED ANDREWS

NEARLY A DECADE AGO, the great LeTourneau Co. of Georgia, builders of heavy grading equipment, established the unique office of Industrial Chaplain. The purpose was to bring a clearer spiritual life and to provide an additional source of comfort and assistance to all employed by the company. This office was something new in industry, and although since then 40 or more companies in various industries have established the office, it is still an unusual one. Time after time I have asked mill personnel directors, "Have you looked into industrial chaplaincy?" and the answer usually is, "We have many churches in our community, and each minister tends to his own flock" . . . or "We feel we can do through our personnel office all that can be done for our people."

Only One Chaplain in the Industry

But it was in a community where there were 55 churches and 40 pastors that I found the only industrial chaplain in the textile industry! Checking his duties, his volunteer work, and his background, I realized that his position fulfilled a purpose and a service answered in no other way. The people in that mill community told me how much the chaplain meant to them as a close personal bond. The chaplain is a strong link between employee and management, as well as between employee, personnel director and superintendent, at all times. And he is an especially sympathetic link at times when assistance is needed.

One man who had recently lost his wife in a tragic accident talked about it with tears in his eyes. "I was all broken up," he said, "and the chaplain took off my shoulders all the extra worries about funeral arrangements and all the details such as notifying personnel and the super about my absence from the job, filing for insurance benefits, calling members of the family over long distance, and notifying my friends and neighbors that I was in trouble. I was relieved of every worrisome care. You know when you've had a great shock and you've lost a loved one, you're in no mood to bargain with an undertaker. And sometimes its mighty hard to explain to friends why a funeral for one's wife has to be on a budget basis. Chaplain took care of all the financial arrangements for me."

Liaison Work Between Management and Workers

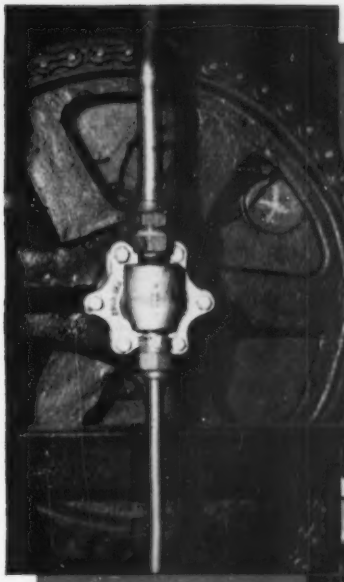
Another worker said, "Chaplain comes through our mill every day. He talks with the overseers and superintendents as well as with the workers. It's surprising how he can tell when we're in trouble, and I am sure that one time he saved me from losing my job! I'd been worrying so much about my old mother and dad and the fix they were in I couldn't keep my mind on my business. Everything was going wrong. The more my pick count fell off the more I worried. And the more I worried the worse my work was. I was just about desperate. Well, sir, before I realized it one day I was telling Chaplain how Ma had been bedridden for years (she's 80 now), and although the visiting nurse took regular care of her, Dad was too old and not strong enough to turn her in bed. I had my job and my family to look after too, and a full-time nurse was out of the question; so she just lay there suffering because she couldn't turn from one side to the other. Before supper time that night Chaplain was out at their house with several of the rough unnapped blankets made right here in this weave room and he showed Dad how to turn an invalid in bed with the heavy sheet or blanket. Maybe it wasn't a big thing in his day's work, but it meant a whole lot to us to think that our company had a chaplain who would do that kind of thing. It relieved my mind so much that I got right back in the groove, and super says my work is showing up fine now."

I heard of another case where the chaplain had saved a family from an increasingly humiliating situation when he persuaded a wayward teenager to slow down. He encouraged her to find new and better interests than the fast life she was stepping into, something her family, her friends and her pastor had repeatedly failed in doing, perhaps because she was determined to rebel against them. Today she is spending so many hours and so much enthusiasm planning recreation for the sick of the community that she has no time for what she now calls "foolishness."

Chaplain Works With All Churches

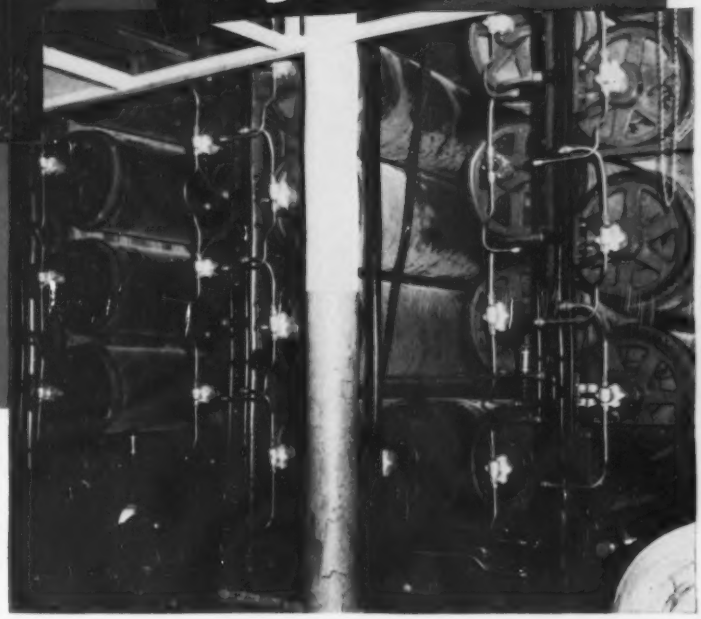
The only industrial chaplain in the textile industry is an ordained minister who has more than 30 years of Y.M.C.A. work behind him. Although a former pastor of the Moravian Church, he has acted as substitute pastor in almost every church in the community. Before the program of industrial chaplaincy was adopted by the mill, it was first presented to the local ministerial association, where the idea was favorably received. Its work is still described as non-denominational. Today the chaplain works in complete harmony with ministers of all local churches and assists them in many ways.

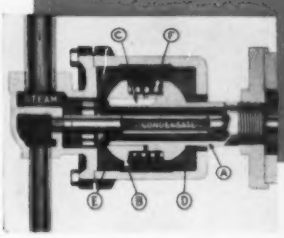
His job is actually that of an industrial-relations specialist who deals out encouragement in times of anxiety, who relieves those in bereavement or distress of unusual business details that are presented by emergency, who cheers the sick and moderates for the unhappy, and who does his work in the mills and within their environment. As the originator of this unique but important job sums it up, "Industrial chaplaincy is Christianity with its sleeves rolled up."



New twist to an already familiar story

JOHNSON Rotary Pressure JOINTS





There's nothing else like it!

Nipple (A) is connected to roll or drum. Collar (B) is keyed at (C) to rotate with nipple, but fits loosely so pressure can fill entire housing. Seal ring (D) and bearing ring (E) are of special carbon-graphite; they eliminate all packing and are completely self-lubricating. Spring (F) is for initial seating only; in operation pressure is the sealing force and joint consequently self-adjusting. Note self-aligning characteristics too—angular space for lateral movement of rotating assembly; spherical seating for angular movement.

For complete information write for Catalog

Johnson Joint installations are no novelty any more. They stretch throughout the textile industry. Today practically all machinery manufacturers furnish Johnson Joints as standard equipment.

This particular installation is newsworthy because of the bent copper tubing used for steam and condensate connections. Simple and economical, such an arrangement is becoming increasingly popular. It provides adequate support without imposing any pipe strains on the joint—takes full advantage of the flexibility built into Johnson Joints.

This flexibility, and many other unmatched virtues, are apparent in the sectional view at left. If you haven't yet switched over, take a minute to refresh yourself on Johnson Joints right now. Remember they save man-hours as well as dollars in maintenance; they not only pay their own way but definitely help toward faster, more efficient production.

JC

Products of The **Johnson Corporation**

814 Wood Street, Three Rivers, Michigan

Rotary Pressure Joints • Compressed Air Separators and Aftercoolers
Direct Operated Solenoid Valves • "Instant" Steam Water Heaters

THIS IS NO. 87 OF A SERIES ON

LEESONA

GETTING THE MOST FROM TWISTING

Information about twisting designed to show improvements in twisting equipment and new ideas in the twisting operation

ATWOOD ®

HOW DOES MODEL 10 STOP MOTION WORK?

Atwood Model 10 Ring Twister

The unique arrangement for stopping both the feed rolls and the spindle when yarn breaks or runs out on the Model 10 provides these important benefits:

1. Knots can be tied in the single end.
2. Drop ply can't get into the package.
3. Roller laps are prevented, eliminating waste.

How does the stop motion operate to make these advantages possible?

Two Stop Motion Elements

The Model 10 stop motion (Fig. 1) has two elements, primary and secondary.

Individual ends pass through porcelain eyes in drop wires located *above* the feed rolls. When an end breaks or runs out, the drop wire for that particular end tilts backward, causing an extension on the drop wire foot to depress a knock-off wire (arrow in Fig. 1). The knock-off wire in turn causes the feed rolls and spindle to stop (as explained below). This is the primary stop motion. It permits tying knots in the single end.

After passing around the feed rolls, the combined ends of yarn pass over a pulley which is located on the outer arm of a stop motion lever. When the yarn is running, it prevents the weight of the lever's inner arm from depressing a connector which couples the knock-off to a trip wire. But if a break occurs in the plied yarn, the lever is released, and an extension on the inner arm (circle in Fig. 1) depresses the connector and trip wire, thus causing the feed rolls and spindle to stop. This is the secondary stop motion.

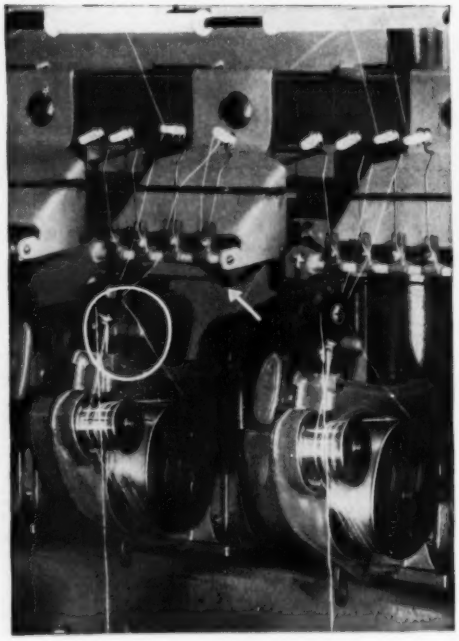


Fig. 1. Model 10 Ring Twister, showing stop motion assembly. A run-out of yarn has caused the unit at the left to be "knocked off" by the stop motion, preventing the loose end of yarn from reaching the feed roll and causing roller lap.

Actually, the feed rolls and spindle are not stopped at the same time. Whenever either stop motion goes into operation, there is a slight, but important, delay between the time the feed rolls stop turning and the time the spindle "knocks off." Similarly, when the spindle is put back in operation, the same difference in timing holds true — although in both cases the actions of feed rolls and spindle appear to be simultaneous.

The reason for the difference in timing is that the feed rolls must stop first in order to control the yarn and keep it under tension. Conversely, when the spindle is put back into operation, the feed rolls must not start feeding before the spindle has started; otherwise, slack twist will result and the yarn will not be placed firmly on the bobbin.

June 1951

23.0.6

LEESONA ATWOOD

WINDING AND TWISTING MACHINERY FOR NATURAL AND SYNTHETIC YARNS

UNIVERSAL WINDING COMPANY

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PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA CHICAGO LOS ANGELES MONTREAL and HAMILTON

LETTERS FROM OUR READERS

Address all communications to:
Editor, *Round Table*, TEXTILE WORLD
330 West 42nd Street, New York 18, N. Y.

Round Table

SUCCESSFUL QUALITY CONTROL

Dear Editor:

In your January issue I enjoyed your article on "Quality Control for Small Mills."

Do you have any more information on the methods of "selling" overseers on quality control? It seems like a very interesting way to obtain quality in cotton yarns.

ANDRE POPPE

Ghent, Belgium

[*The quality-control program at Pilot Mills was put on a successful basis because the overseers feel that they have a part in the program. The quality-control man always works directly with the overseers. The overseer has the responsibility of correcting defects the quality-control lab discovers. Many quality-control programs fail because the quality-control man tries to run the mill. To be successful, the quality-control program must include the overseers as key men.*—EDITOR]

LABOR-RELATIONS EDITORIAL

Dear Editor:

I have read with much interest your excellent and very timely editorial, "How Are Your Labor Relations?" that appeared in the March issue.

This editorial expresses my sentiments and undoubtedly will arouse considerable interest in convincing many textile executives, as well as other top production key men, of the vital importance of your well-expressed remarks and facts.

I am convinced your statements are in accord with the present-day thinking in the textile industry as a whole.

ALABAMAN

Sylacauga, Ala.

DOFFER SPEEDS

Dear Editor:

While reading through the March issue, I noticed a letter from "Overseer—Somewhere in Georgia" regarding the limits of cotton-card doffer speeds.

A very interesting paper was presented at the annual conference of the Textile Institute in 1947; and I would refer your reader to that paper, "Production Rates in the Carding of Short Staple *Fibro* on the Revolving Flat Card," by Morton and Shahin.

I trust your reader may obtain some help from this reference, which I have forwarded privately.

ROBERT H. PEARCE

Rochdale, England

WOOL-SLIVER LICKING

Dear Editor:

A good way of preventing licking of adjacent wool slivers in the creel of a gill box appears to be a system of reversing funnels at the second finisher gill box. Funnels are available that are effective in binding in the loose fibers that are primarily responsible for starting the licking of fibers.

The reversing funnels are designed to have a slight stop or dwell when the balling head reaches the end of its traverse. When the funnel stops rotating for a moment, false twist is run onto the ball. This false twist binds all loose fibers at these points.

On reversal of the balling head, the funnel rotation also reverses so that left- and right-hand false twist are put in respectively.

Care in handling tops should also be stressed, as any lack of care in handling is the primary cause of fiber disturbance.

H. M.

Yorkshire, England

MILL ILLUMINATION

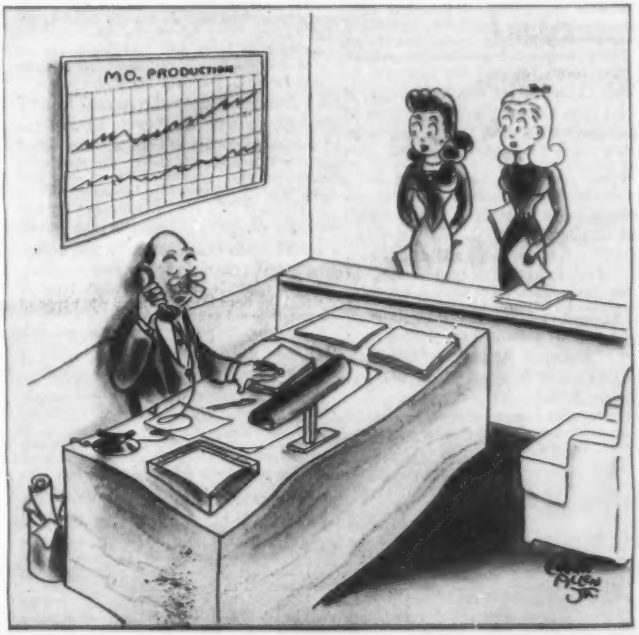
Dear Editor:

Excuses that existed in the past for improper illumination in a mill no longer hold. Costs, for example, have been dropping sharply each year. The cost of completely modernizing the lighting in any textile mill is now so low that the benefits of complete illumination far offset the initial expense.

Statistics collected over a number of years show poor lighting as the direct cause of 5% of all industrial accidents and a contributing cause of 20%. Any mill whose accident rate has been high can well examine its lighting.

Diffusion, direction, and distribution of

TEXTILE TICKLES . . . . . By Edgar Allen, Jr.



"He's ordering mule rope and saddles—guess he must be buying a farm or something!"

light are important in their effect upon the ease and accuracy of worker vision.

The principle of diffusion is the expansion of the size of the light sources and the scattering of light in all directions. Fixtures that cannot accomplish this purpose have no place in any mill, for they are obsolete.

Direction of light determines how shadows fall over and around work or are completely eliminated. The latter goal should be sought, not only for the sake of efficiency but also for the prevention of accidents.

An even distribution of light over working areas has been found to be the answer to many eye-fatigue problems. In jobs where employees' eyes must move from one object to another, or from one section of the work area to another, an uneven distribution of light (running anywhere from glare to shadows) has been found to encourage fatigue. Balanced lighting can be checked by sensitive meters. When these are not available, an ordinary photographer's light meter can be used effectively.

ERNEST W. FAIR

Bristow, Okla.

BUILDING TOP MANAGEMENT

Dear Editor:

Top management, in most companies, is no longer a "one-man job." Yet, in many companies, top executives are still underrating the capacity of juniors to assume responsibility.

Where responsibility is passed to competent juniors, top executives achieve a great increase in their own effectiveness.

Many companies have already formed executive teams to meet the increased demands on modern business leadership. For such a team to work effectively, it must be small enough to allow for frequent face-to-face contact between the top executive and his assistants.

These conclusions come from an intensive study of human problems of administration in 12 companies with annual sales ranging from $5,000,000 to $250,000,000 and observations and data from a large number of other company studies.

My colleagues, Research Associates David N. Ulrich and Donald R. Booz of the Harvard Graduate School of Business, and I recently presented our findings in a book, "Executive Action," published by the Division of Research of the Harvard Business School.

We thought some of your readers would be interested in knowing what our conclusions were on this subject.

EDMUND P. LEARNED
Harvard University

Cambridge, Mass.

MILL-FLOOR MAINTENANCE

Dear Editor:

Floors kept in good condition are a good way to boost employee morale.

As soon as possible, a sealing compound should be applied to a new or newly reconditioned floor. The compound seals the fibers of the wood and keeps moisture from soaking in. Grease or oil or water will not penetrate and so are not hard to remove. It is then child's play for the sweeper to keep dirt, trash, and lint off the floor, as it is "slick" and there is nothing to catch and hold material.

To renew a floor after several months' wear, it is only necessary to go over the floor again with a sanding machine fitted out with a steel-wool sheet. The steel wool removes that accumulation of dirt and grease that is eventually inevitable.

About once a year, or whenever the raw surface of the wood begins to show, a mill should re-do the floor with the sealing agent. The elapsed time between re-sealing cycles depends a lot on what type of wood the floor is made of and what type of wear it is subjected to.

Some mills prefer to use the old-style method of scrubbing the floor with a scrubbing machine instead of sealing the floor chemically and cleaning occasionally with a sanding machine.

It is usually necessary to scrub floors about once a week with the scrubbing machine and then scrub certain areas around machinery every month or two with a small hand brush. Scrubbing does keep floors clean, but it also has to be done quite frequently. In addition, soap and water tend to rot wood; so floor life is shorter than if the sealing and dry-cleaning method is used.

Of the two systems of floor maintenance, I believe sealing and sanding is not only cheaper in the long run, but it also keeps floors looking better day in and day out. Which ever system is used, though, a systematic set-up for the care of floors must be devised and adhered to if floor maintenance is to pay dividends.

R. H. PHARR

Carrollton, Ga.

IMPROVED AMBLER SUPERDRAFT

Dear Editor:

Commercial experience gained with the Ambler Superdraft system in England over the past year has led to several improvements.

The main problem appears to have been one of periodic yarn variations that coincided with front-roll circumference.

In long drafting, a much heavier roving is used than that employed in normal drafting. The sudden reduction from heavy roving to fine yarn means that if for any reason a vertical movement of the top roll occurs, the total number of fibers gripped by the front-roll nip is affected. Since the attenuation is much greater than on ordinary systems, the number of fibers passing forward must be controlled more completely.

It is evident that no roller eccentricity whatever is permissible. A soft-covered roll provides a more flexible nip and gives a greater arc of contact; but under conditions of high drafting, a high pressure is necessary. It is being found that a rough, granular surface seems desirable. Synthetic-rubber-covered rolls accurate to fine limits are now being used with improved results.

TEXTILIAN

Lancashire, England

TEST YOUR TEXTILE IQ

▶ Each correct answer rates 10 points. A total of 70 is passing; 80, good; 90 excellent; 100—you're a genius! Keys to answers are on page 220.

1. According to recent scientific studies, high-producing supervisors
   a. are closely supervised
   b. are not worker-conscious
   c. give only general supervision
   d. don't like responsibility
2. A new sample-weaving machine features:
   a. electromagnetic dobby
   b. automatic shuttle changer
   c. positive let-off
   d. shuttleless picking
3. Half-hose knitting machines should be overhauled now because:
   a. parts are cheap
   b. labor is cheap
   c. season is slack
   d. materials need to be conserved
4. One of the best ways to reduce your knitting operating costs is to:
   a. run until parts wear out
   b. practice preventive maintenance
   c. use unskilled labor
   d. forget maintenance
5. A good maintenance program for knitting machines should include:
   a. oiling and cleaning needles monthly
   b. replacing needles as a set
   c. oiling with low-viscosity oil
   d. cleaning cam sections weekly
6. Drop stitches in the make-up on 400-needle machines are an indication that:
   a. timing is faulty
   b. sinker slots are loaded
   c. cams are worn
   d. dial is not centered
7. Tricot machines should be releveled at least:
   a. once a month
   b. every two months
   c. twice a year
   d. once a year
8. Rectilinear combing machines are suitable for handling wool or blends in average staple lengths of:
   a. 1 to 4 in.
   b. 2 to 6 in.
   c. 3 to 5 in.
   d. 1 to 8 in.
9. Electric tractor trains in use in cotton mills:
   a. save money
   b. cost more money
   c. require more labor
   d. complicate handling
10. The SRRL-type cotton opener is designed to:
    a. clean low-grade cotton
    b. replace gins
    c. give a gentle opening
    d. remove neps

IMPROVED
Emery Twitchell Oils For SANFORIZED FABRICS

Now...Emery Twitchell Oils 7240 and 7250 Give You 4 Extra Advantages

1. **IMPROVED COLOR and ODOR STABILITY...** will not yellow or stain fabrics. Cannot turn rancid on fabrics during storage.
2. **GREATER HEAT STABILITY...** Major improvement in heat stability gives maximum resistance to volatilization and decomposition during processing.
3. **INCREASED RESISTANCE TO SALTING OUT...** compatibility with finishing additives such as salts and other weighting agents is improved considerably.
4. **GREATER REWETTING ABILITY...** Faster rewetting increases fabric throughput . . . gives greater overall production efficiency during compression shrinkage. More uniform rewetting results in uniform shrinkage.

In addition to the major improvements listed above, these new Emery Twitchell Oils provide the following characteristics:

FIBER LUBRICATION—The excellent lubrication characteristics provide for easy and uniform rearrangement of the fibers during the preshrinking of fabrics. Prevent sticking at the shoes, enable increased processing efficiency.

REWETTING—High rewetting speeds for faster processing and uniform rewetting of fabrics. Treated fabrics retain rewetting properties indefinitely.

SOFTNESS—For various fabrics and finishes, Twitchell Oils provide the different degrees of softness required to meet specific needs.

CHOOSE THE TWITCHELL OIL WHICH BEST MEETS YOUR REQUIREMENTS

PRODUCT	FIBER LUBRICATION	REWETTING	SOFTNESS	STAINING
Twitchell 7250	Very Good	Fastest	Softest	None
Twitchell 7240	Excellent	Fast	Moderate	None
Twitchell 7231	Excellent	Medium	Slight	None

For a recommendation to fit your particular need, contact our Sales Service Department.

EMERY INDUSTRIES, INC.
Carew Tower · Cincinnati 2, Ohio

Pointers FOR SUPERVISORS

How the Management Team Can Build Better Human Relations

Get Your Ideas Across in Language Your Employees Understand

► If the language your company uses in writing for employees is high-brow, chances are its readership rating is low. In case your "style" is turning your writing into fodder for the waste-basket, here are some pointers on readability that are really easy to use. Find out just how readable your writing is. Then see what you can do to put your ideas into language your workers will read and understand.

By JAMES GARDNER

Assistant Director of Personnel Research, Fieldcrest Mills.

COMMUNICATION WITH EMPLOYEES in mills is becoming more and more essential. Everybody recognizes the need, and companies are using all sorts of media for doing the job. But no matter how many methods you have for passing along the word to your employees, you haven't communicated with them if they don't understand it.

You'd be surprised at how much writing directed to employees is too "high-brow" for the workers it is intended to reach. Actual studies made of readability in various company publications have shown that its level is generally too high for the rank and file.

A rather disturbing finding is that the kinds of things management would like most to get across are often the very things that are made most difficult to read. Such articles include plant news, product news, and management-information items, such as news about executives, changes in management, descriptions of staff functions, and personnel notices.

These findings aren't very encouraging. But there's no reason why your writing for employees should be either unread or ineffective. Making sure you are being understood means using the kind of writing that's geared to the level of readability of your workers. Fortunately, at least one ready-made tool is at your disposal that will help you to do the job. This tool is the readability formula developed by Rudolf Flesch and described in his book, "*The Art of Plain Talk.*"

—*The Art of Plain Talk* by Rudolf Flesch, Harper & Brothers, Publishers, New York

Shrink Your Sentences

Here's a formula that will tell you not only how readable your writing is, but also give you some of the basic ingredients of a readable style. As worked out by Flesch, the formula gives a valid index of reading level, as well as an index of human interest. It does not use a word list and is easy for the amateur to apply.

Some of you are pretty familiar with the selection process used in the personnel department in your plant. If you are, you are accustomed to using tests to determine the relationship between each test and job performance. You also determine the relationship between the tests. Then you develop a formula which will predict how well a person will do on the job with certain test scores. Flesch applies this same sort of formula to writing. He makes it possible for you to take any piece of writing and determine, on the basis of word length and sentence length, the particular level of education required for understanding the writing. By use of a simple table you can easily and quickly find out whether the style of your writing is easy, standard, or difficult.

And this isn't only for the statisticians! Anyone can do it. A recent study on the reliability of the formula indicated that an inexperienced analyst will get just about the same results as an expert in applying it to a piece of writing.

The first step is to decide the level of writing which is understandable by your employees. This means you must know the general level of education of the employees. Then, gear your writing to fit that level of education. Actually, it is a good plan to write for a level of education slightly below the level of your workers. People don't customarily read what is just understandable for them; they read simpler things.

Your workers may be impressed by long-winded write-ups and non-breather sentences. But chances are they're not. Probably few of them are willing to take the time or effort necessary to compete in a mental marathon. Don't exhaust their effort with polysyllables, double compound sentences, and subordinate clauses. Flesch says that writing whose average sentence length is 17 words and which has 147 syllables per 100 words can be understood by people with 7th- or 8th-grade education. On the other hand, if our writing has an average sentence length of 25 words and has 167 syllables per 100 words, it is difficult and requires high school or some college education for comprehension.

Stress the Human Angle

However, shorter sentences and shorter words are not the whole story. Conciseness of expression may tend to take the life out of your style. And if your writing is dull to begin with, revision of it will be doubly hard. It is very important to keep your writing at a high interest level.

One clue to achieving interest if your writing is dull, according to Flesch, is the use of personal words and personal sentences. Write to the worker just as you'd talk to him if he were with you. The personal angle is what interests people. Personal words and sentences can jack up your material and put salt and pepper in your style. Talk about "you" and "we", or "he" and "she," wherever you can. Leave the impersonal "it" and "they" to the encyclopedists.

Actual quotations of spoken sentences with speech tags, such as "he said", or "he explained", help, too. It's one more way of giving your reader a sense of personal relation to the actual event you're writing about. Don't use an impersonal word or

(*Continued on page 198*)

in wool dyeing*...

INDIGOSOL-O

for the Fast Navy!

*Save time . . . use your regular equipment!

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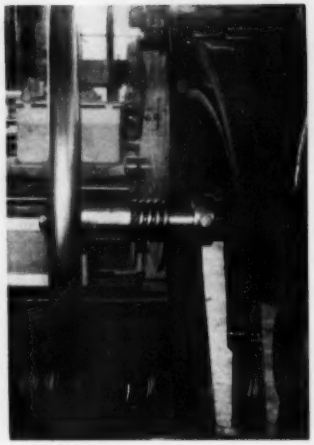
Kinks AND SHORT-CUTS

Spring Prevents Reversal Of Hand Wheel

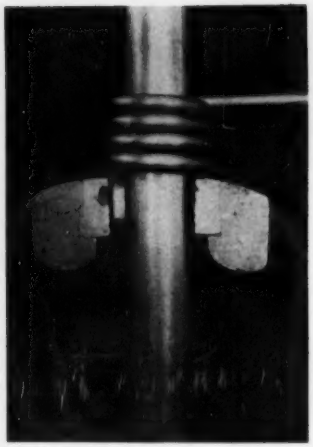
Many machines are fitted with a hand wheel so that the machine can be turned into any position when adjustments are being made. If a rectilinear combing machine equipped with a hand wheel is turned backwards, the fine pins in the combing cylinder are likely to be damaged by the noil-clearing brush. Often inexperienced or careless operators will turn the wheel backward and cause this damage.

A very simple and efficient way of preventing the machine from being turned in the wrong direction is to fasten the hand wheel to the shaft by means of a coil spring. One end of the coil spring is fastened to the hand wheel, and the spring is made to fit tightly on the shaft. The hand wheel is loose and is not fastened directly to the shaft. A screw with a washer larger in diameter than the size of the shaft is fastened to the end of the shaft and holds the hand wheel in place.

If the hand wheel is turned backwards, it tends to uncoil the spring. It will lose its grip on the shaft, and the hand wheel with the spring will rotate without moving the shaft. When the hand wheel is turned in the correct direction, the spring tightens on the shaft and allows it to rotate with the wheel.



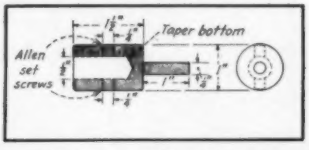
THE HAND WHEEL on this rectilinear combing machine is not fastened to the shaft. One end of the coil spring is inserted in a hole in the side of the hub, and the spring is tightly fitted to the shaft. When the hand wheel is turned clockwise, the spring tightens up and the shaft turns with it. When it is turned counterclockwise, the spring tends to uncoil; and the shaft will not turn with it.



THE COIL SPRING can be made in a few minutes by any practical mill man. It can be made with a length of ¼- or 5/16-in. mild-steel rod. First bend the steel rod at a right angle about ½-in. from the end. Then hold the rod in a vise together with a piece of round steel bar ⅛ in. smaller in diameter than the shaft that the spring is to be used on. Then wind the rod around the bar.

A tempered spring is not necessary; it can be made with a length of ¼- or ⅜-in. mild-steel rod. The method of attaching the spring to the hand wheel is not important. In the photograph, the end of the spring has been inserted into a hole bored in the side of the hand-wheel hub. An alternative method is to loop the end of the spring and fasten it to the hand wheel with a screw. If the hand wheel has spokes, the end of the spring can be looped around one of the spokes. *T. F. Griffin, England.*

We Designed an Adapter Shank for Our ¼-In. Electric Drill



THIS ADAPTER SHANK enables us to use ½-in. bits in our ¼-in. electric drill. With this adapter shank, any bit up to ½ in. may be used without having to grind the shank of the bit.

In many mill-repair shops, the shanks of bits larger than ¼ in. are often ground down to fit the chuck of a ¼-in. electric drill. We made this adapter shank so that we can use any bit up to ½ in. without grinding the shank of the bit. The shank has one end turned down to ¼ in. and fits directly into the chuck on the drill in the same position as a regular bit. The other end of the shank is drilled out to ½ in., and the bit to be used is held in place with two Allen set screws. The tapered bottom of the hole helps to center the end of the bit.

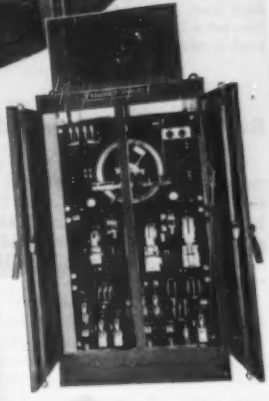
To prevent overloading of the ¼-in. electric drill, first drill the hole with a ¼-in. bit and then enlarge the hole to the desired size with the larger bit held in the adapter shank. This procedure is especially advisable if you are drilling holes in thick stock.

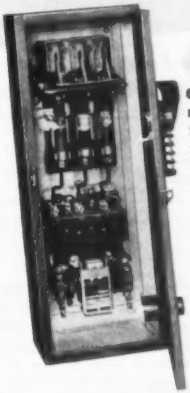
SQUARE D

DESIGN LEADERSHIP in TEXTILE CONTROL

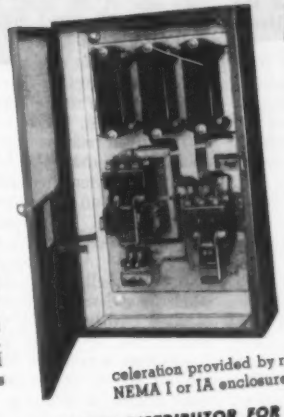
Shipper Rod Control Station Flexible design permits conversion to either l.h. or r.h. operation, clockwise or counter clockwise rotation. Slotted operating arm for easy adjustment. Snap action contact mechanism.

Loom Switch Toggle operation with recessed handle. Protected type overload relays for group fusing. Accessible terminals. Available with line connections either top or bottom. Cover interlock with padlocking provision for maximum safety.





Combination Starter New switch operating mechanism provides maximum safety. Interlock prevents opening door when disconnect is "ON" and self-aligning handle indicates true position of switch. Provision for 4 padlocks. New switch design has visible blades; quick make and quick break; dead-front line terminals. New magnetic starter with guided motion of armature insures long life.



Range Drive Control Custom-built control for padder, tenter, winder, folder, pre-dryer, batcher machines, and other special textile machinery control applications.

Roving Frame Starter Primary resistor type. Definite time acceleration provided by reliable pneumatic timer. Available in NEMA I or IA enclosures.

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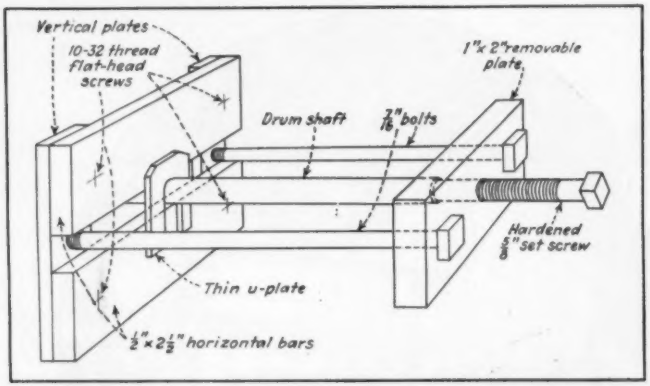
Device Removes Clutch-Drum Shafts From Seamless Knitting Machines



***THIS CLUTCH-DRUM SHAFT REMOVER** was made for Scott & Williams machines, but it can be adapted easily to other makes of machines. Here's how to use it. Take the two 7/16-in. bolts out of the vertical plates. Remove the top screw on the left-hand side which holds the vertical plate to the horizontal bar. Loosen the lower screw on the same side.*

Turn the vertical plate down to the horizontal position and clamp it with the screw. Loosen all setscrews on the clutch-drum shaft, and remove the cotter pin beside the chain sprocket. Push the left hand end of the remover in from the back of the machine with the drum shaft between the horizontal bars. With the remover plate just a little way from the machine frame, put the two 7/16-in. bolts back into the remover.

Leave enough space so that the setscrew may be placed in the middle of the end of the drum shaft. If the setscrew does not push the drum shaft far enough, turn the setscrew out; then put a bronze plug in the hole in the frame and push against its end. All of the material used is cold-rolled steel obtained from discarded machinery.

Whenever seamless-knitting machines become blocked, the clutch drum is usually moved out of position and setscrews in the drum score the shaft. After this condition has occurred a few times, it is best to remove the shaft and file the burrs off. Often it is possible to remove the shaft by driving on its end, but the driving sometimes upsets the end and makes the shaft difficult to remove.

We made this device to help us remove the clutch-drum shafts. Although we made this remover for a Scott & Williams machine, we think it can be adapted easily to other makes of machines. The operation of the device is explained in the sketch and caption, but here are pertinent facts about its construction.

The four flat-head screws, which hold the vertical plates to the horizontal bars, should be centered. The thin U-plate is placed over the shaft to bring the pressure of the device on the hub of the sprocket-chain drum instead of on its rim. The remover plate must be heavy enough to prevent bending. *Walter A. Simond, Essex Junction, Vt.*

Resized Warps Returned With End-and-End Lease

Occasionally we have to resize a filament warp. Contrary to general practice, we return the resized warp to the loom with an end-and-end lease, as a new warp should have, and the ends are not stuck together. Here's how we do it.

Before we remove the warp from the loom, we take an end-and-end lease from either the drop wires or harness frames. Then we return the warp to the slasher room, where a hook reed has been prepared to accommodate such a warp. We save from a completed set twisted in 2-as-1 (2 from warp to 1 from reed) one-half the number of ends in the warp to be resized.

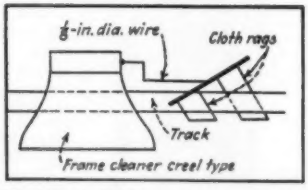
A string is put in between each section beam and is carried to the back of the hook reed (on the size-box side); then a one-and-one lease is taken and held by two round wooden rods and made solid. The warp to be resized is twisted on to this lease. When the twisting-on or tying is completed, the rods are taken out of the reed lease. One-half shed is taken out of warp lease. Do not lose this half shed.

One by one, strings are worked back through the hook reed with flat wooden rods about 2 in. wide. These rods give ample room to spread one sheet away from the rest. The spreading allows another rod to be placed through the opened sheet on the warp side of the reed. The rod is then carefully worked through and by the twist to meet the half shed. When these two rods are brought together, two separate sheets will be formed; one over the cross, and one under the cross.

Two lease rods are put in and set back on the rod holders. Then the first string from the reed is pulled out and a second one is passed through the hook reed. The same method is repeated for each of the strings originally saved. A half shed from the warp is saved all the way through, even when we are resizing the warp. The twists are then passed through the reed to the top of the first cylinder. A pin lease is taken at the hook reed for use by the slasher tender at the front comb. A string is put in between each sheet and is brought to the front end of the slasher. Rods replace these strings for slashing.

The warp is now ready to be resized, and every end is independent of all others. When the warp is finished, the lease can be taken at the hook reed. We use the same procedure as we would on any regular set, except that two rods must be between each sheet. One rod is needed to take the lease, and the other is needed to hold slack in the warp. The warp has to be slackened by hand enough to allow the lease rod to reach the last holder.

Drag on Frame Cleaners Keeps Lint Off Cleaner Track



***WE PUT A DRAG** on each of our frame cleaners to keep lint off the creel cleaner track. The drag consists of two pieces of cloth attached by a piece of wire to the back of the cleaner. The drag follows the cleaner around the track and keeps it free of lint.*

This drag has eliminated the necessity of blowing off or hand cleaning the track. It has reduced yarn defects caused by gouts, which can often result from blowing the accumulated lint from the track.

The Yarn can't jump out...

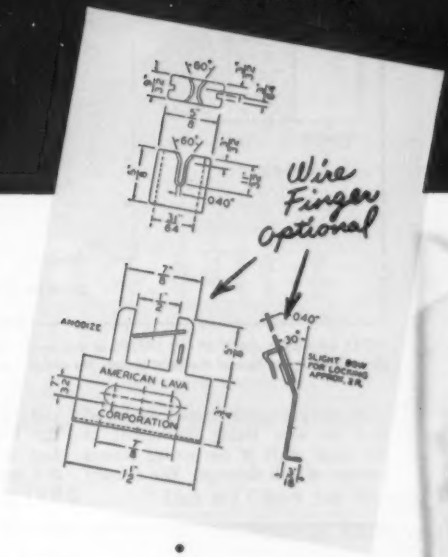
IMPROVED

AlSiMag

U. S. PATENT NO. 2,214,702 AND OTHER CLAIMS PENDING

WINDER AND REDRAW GUIDES

(PATENTED)



These AlSiMag guides are lowest in cost per pound of yarn processed. Mills all over the country have been running them for more than two years. In most mills the guides do not yet show any signs of wear. In every instance these AlSiMag guides have outlasted the best former guides by several times. One mill which had to replace their former guides every two weeks has now run these AlSiMag guides more than two years with no sign of wear.

This AlSiMag guide and holder is now offered with special, corrosion resistant wire finger attached (as optional equipment) to prevent yarn from jumping out. This means higher speed production.

This new AlSiMag guide is offered as a guide alone or as a guide with holder. The holder is anodized aluminum with wire finger attached. It is easily mounted on the frames of Monarch, Sipp-Eastwood or Atwood Winder, Spinner and Redraw machines. Oblong screw slot permits ready adjustment and positioning.

The AlSiMag guide slips into curved fingers of the holder. These fingers are curved or bowed slightly to form a spring tension on the slots on the outer sides of the inserted guides. A special, corrosion resistant wire finger keeps the yarn from jumping out. The guide may be pulled out for cleaning and slipped back into position easily, and the holder may also be removed easily for cleaning.

The AlSiMag Winder and Redraw Guide is made in three different materials:

ALSIMAG 192 (considered standard) A non-conductor of electricity. Hardness of 8 on Mohs' scale. Gives exceptionally long life on most requirements. Ivory color.

ALSIMAG 193 A conductor of electricity, used for dissipating static charges. Metallic gray color. Otherwise it is identical to AlSiMag 192.

ALSIMAG 491 Super hard, highly resistant to cracking, chipping. Great mechanical strength. Hardness of 9 on Mohs' scale. Its cost is justified where excessive wear is experienced or where satin finish must be maintained under severe conditions. Light blue color.

Guides in any of these materials are available in either High Polish or Satin Finish

ASK FOR FREE SAMPLES

Test these AlSiMag Guides in your mill! Let them tell the story. You'll find they give you:

1. Far longer wear.
2. Uninterrupted production.
3. Better quality yarn.
4. Higher speed.
5. The lowest cost per pound of yarn processed.

(One mill reported that with these AlSiMag guides his cost was 1/20th of former guide costs!) Write for your free test samples and let them prove it!

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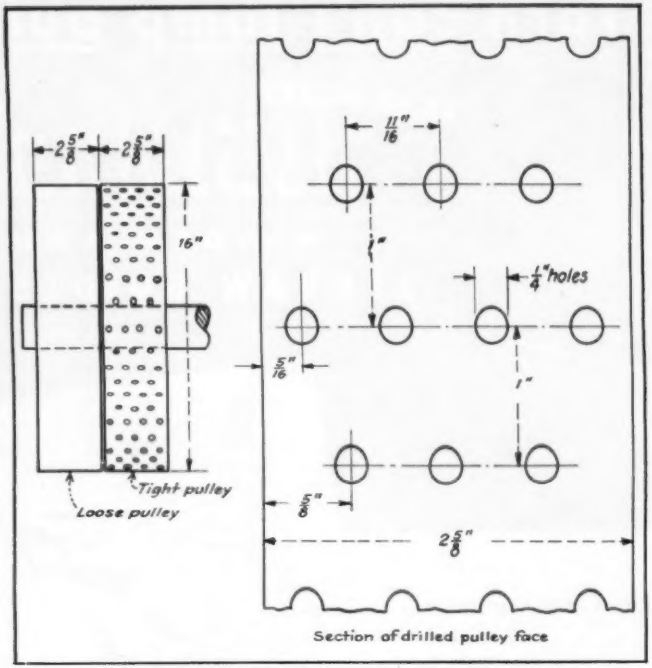
Kinks AND SHORT-CUTS

Holes Drilled in Frame Pulley Prevent Belt Slippage



MORE UNIFORM MAIN-SHAFT SPEEDS of our roving frames were obtained after we drilled these holes in the face of the tight pulley. No undue wear on the belt has been noted.

In making speed checks, we found that we were losing revolutions of the main shaft of our roving frames because of belt slippage. We cleaned and dressed the driving belt, adjusted the belt tension, and cleaned the face of the pulley; but the frames did not come up to the standard speed. We removed one tight pulley and drilled ¼-in. holes in the face as shown in the drawing. When this pulley was replaced and the frame started, the main-shaft speed was close to standard.

The holes are drilled all the way through the surface of the pulley to permit accumulation of lint or waste to fall through to the inside of the pulley. The holes do not become blocked. The holes help to keep the belts clean because they appear to scrape off any collection of waste on the belt. We have not noted any undue wear on the belt. Pulleys drilled in the same way have been tried on spinning frames, and we have gotten the same good results.

Air Hose at Each Frame Makes Cleaning Easier

We have run the air lines in our spinning room under the floor and have a connection at each spinning frame. At each connection an air hose is permanently attached. The air hose is connected at a point in the middle of one side of the frame. The hose is long enough to reach each end of that frame and the adjoining side of the frame next to it.

With this arrangement, the spinners can do their own blowing down in a minimum amount of time. Our spinners blow down twice each shift *Arthur Pendleton, Roanoke Rapids, N. C.*

$200 for Best Kink in 1951
$25 for Best Kink Each Month

In Addition to Space Payment on Acceptance

You undoubtedly know of many kinks and short cuts that are helpful to mill operators. Write them down and send them in. We pay promptly on acceptance—before publication. In addition, your kink may win the $200 check for the best kink of the year or the $25 check for the best kink of the month, maybe both!

Send in your kink now. There is always a contest going on. The more good kinks you send in, the better your chances of winning a prize in addition to earning some easy money for every kink accepted.

We will polish up your writing and will have an artist make finished drawings. But send in plenty of details so that your kink can be clearly explained. Be sure your sketch is clear and well labeled, but it need not be a polished job. Best of all, send us a good glossy photograph of it—we will pay you extra if you do and we can use it.

Look over the kinks in this and other issues. You will get ideas you can use as well as inspiration for kinks you send in. We like items that pertain to ways for improving machines, new devices that a mill man can build, attachments or methods of merit—anything that will cut costs, improve quality, or help production.

Your published kink will be judged impartially by other mill men. In case of ties, duplicate prizes will be awarded.

RULES OF CONTEST

1. No limit to number of entries.
2. New $25 prize contest every month, $200 prize contest for the year. Monthly contest confined to kinks published that month, yearly to those published in calendar year 1951.
3. All kinks paid for on acceptance; extra payment for photographs. Drawings need not be finished (clear detailed pencil sketches will do).
4. Previously published material not eligible for prizes.
5. Unless you advise to contrary, we assume we may sign your name to kink when published.
6. Prize winners will be selected by readers, a different group each time. At least 200 will be asked to select preferred kinks in each issue. Their votes will select the best kink, and their decision will be final.

Send kinks to whichever address you prefer:

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No other synthetic organic detergent gives you this combination of properties!

- EXCEPTIONAL DETERGENCY
- QUICK, THOROUGH RINSING
- REMAINS CHEMICALLY STABLE
- HIGH AND RAPID SOLUBILITY
- EXCELLENT WETTING
- COUNTERACTS HARD WATER DIFFICULTIES
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- REDUCES SURFACE TENSION

NYTRON offers you many advantages for your textile operations. This versatile product works in cold water, as well as in warm or hot water. It is effective in hard water . . . leaves no scum. And it's economical—can be used to replace all or part of high-priced soaps.

NYTRON can offer you these advantages because it has an exclusive combination of properties . . . a combination available in no other detergent. This patented wetting agent-detergent is not an alkali, not a soap, not a mixture. It will bring down the cost of your formula and improve the quality of your work!

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- scouring prior to yarn and cloth dyeing
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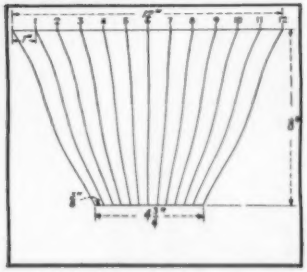
Use This Chart To Divide Sheets Into Equal Columns



EVENLY SPACED COLUMNS on the tabulating sheets can be drawn easily if you use a chart like this. Line up the outside diagonal lines on the chart with outsides of your first and last columns. If you want 12 columns, mark your sheet at every diagonal line, horizontally across the chart; if you want six columns, mark every other line; four columns, every third line; three columns, every fourth line. The chart, of course, can be modified for other uses.

We made this chart to help us quickly divide test sheets into vertical columns. Our blank forms have ruled horizontal lines, but we draw in the vertical lines. The number of vertical columns that we need on our test sheets varies from 4 to 12.

Our chart can be used on any sheet up to 12 in. wide or as narrow as 4¾ in. wide. The chart can be modified for larger or smaller sheets, and it can be used any time dimensions are to be divided into any number of equal parts.

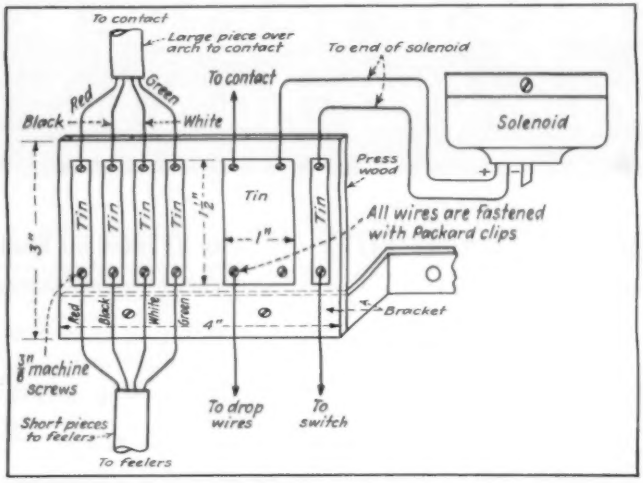
Here's how to make out the chart. Draw in the vertical line (6) first. Divide the top line into 12 equal parts, and divide the bottom line into the same number of equal parts. Then draw the diagonal lines from the top to the bottom lines.

Here's how we use the chart. As an example, suppose that you want to divide an 8½-in. sheet into 12 equal vertical columns. Place the sheet over the chart, and keep the left-hand diagonal line on the chart lined up with the top left-hand corner of the sheet. Move the sheet down on the chart; and keep the top edge of the sheet parallel with the horizontal lines on the chart until the top right-hand corner of the sheet touches the diagonal line, which is marked 12.

The next step is to mark off the sheet at each division point on the chart to give 12 equal divisions across the width of the sheet. Do the same thing at the bottom of the sheet and draw in the vertical lines.

Other sized columns are possible. If you want to divide the same-sized sheet into six equal columns, mark the divisions from every second diagonal line.

Wire Terminal Saves Cable Wire on Filling Feeler



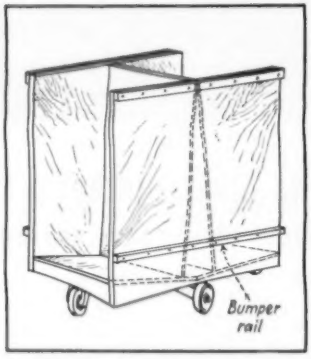
THIS TERMINAL is made from a piece of 3x4-in. pressed wood, tin from tobacco cans, 3/16-in. round-head steel machine screws and nuts, Packard wire clips, and a mounting bracket. Since the cable wire usually breaks at about the same place (where it goes around the loom frame), only a short piece of wire needs to be replaced when a break occurs.

The stranded wires inside the cable wire used on the Garfield filling feeler usually break at the same place after being in use for some time. Before we made this feeler terminal, we had to replace the entire cable when a break occurred; even though three-fourths of the old cable was still in good condition.

We've found that with this terminal the good length can remain on the loom indefinitely, and a short piece from the terminal to the feeler prongs is the only part that needs to be replaced when a break occurs.

Because the kink saves us money, we have installed these terminals on several of our looms, and we are putting them on all of the rest of our looms. Albert L. Bernhard, Allentown, Pa.

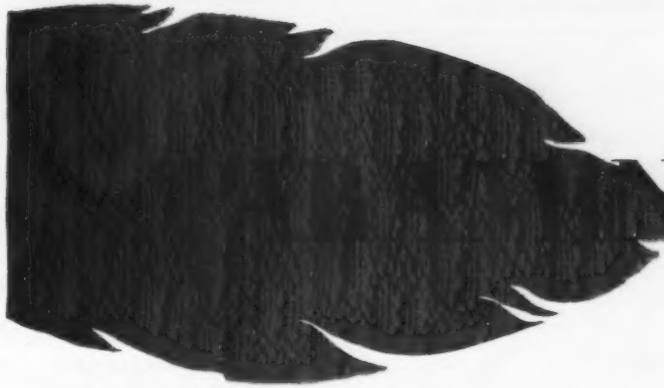
Vertical Roving Trucks Reduce Handling Costs



CONVENTIONAL BOX-TYPE TRUCKS for moving roving have the disadvantage of requiring extra storage space. To improve the handling of our roving, we made a number of trucks with open ends and wedge-shaped partitions in the middle of the boxes. The bottoms of the boxes slant from the ends toward the middle. Each box holds two doffs of roving, while the old type held only one. Both boxes occupy about the same floor space.

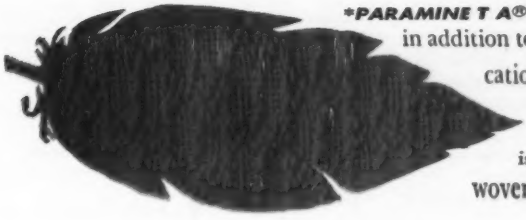
The roving is laid directly into the new box at the time it is doffed. After the box is filled, it may be stored in an area provided for this purpose; or the roving may be laid up on the spinning frame directly from the box.

We have reduced the cost of handling roving, and, in addition, we have found that the roving reaches the spinning frames in better condition. William C. Gibson, Jr., Decatur, Ga.



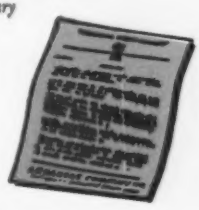
E ta

for durable softness and added sales appeal...



***PARAMINE T A® produces a soft... yarn** in addition to a pleasing surface finish. An efficient cationic product, it imparts a durable, long-lasting, full hand to cotton and rayon fabrics, woolen cloth and hosiery. It is highly effective on all styles of woven and knitted goods, including tricot and glove fabrics.*

PARAMINE T A is excellent for finishing cotton goods, plain dyed and printed in combination with gums, starches and similar products. On prints of very open design and blotch work, it gives a more even hand from selvedge to selvedge, and a smooth feel unobtainable with ordinary softeners. Write for details.



Arkansas Co., Inc.
P. O. Box 210
Newark, N. J.

Gentlemen:

Please send me, without obligation:

- ☐ Full details on PARAMINE T A
- ☐ Sample and application procedure
- ☐ Details of mill demonstration

NAME _____ TITLE _____

FIRM NAME _____

ADDRESS _____

STATE _____

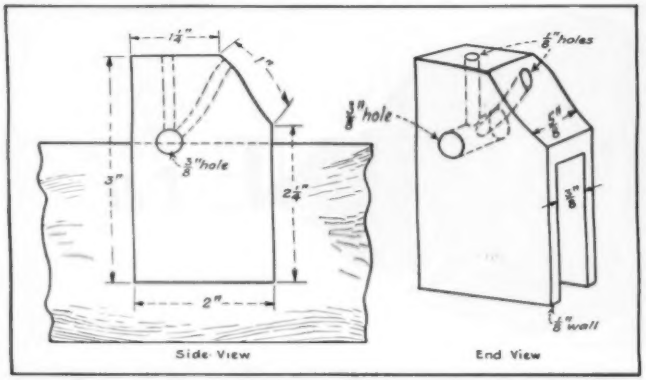
2-8-1

Arkansas Co. INC.

MANUFACTURERS OF INDUSTRIAL CHEMICALS FOR OVER 45 YEARS
NEWARK, NEW JERSEY

Kinks AND SHORT-CUTS

Jig Helps Center Drill for Harness-Hook Holes



WE MADE THIS JIG to help us center our drill and keep it straight while we drill holes for our harness hooks. We had the jig made of steel and then had it hardened. It fits tightly over the harness slat. The 3/8-in. hole cut in the side of the jig is used as a sight hole to line up the drill with the spot to be drilled. The angle hole is used for the bottom hooks of the harness. L. Hayter, Huntingdon, Quebec

Best-Kink Award For April

Each month TEXTILE WORLD awards $25 to the submitter of the kink which is judged by a panel of over 200 practical mill men as the best for that particular month. A new batch of kinks appears each month, and a new group of readers acts as judges each month.

If you are asked to judge one of these days, be sure to help select the best kink by sending back your answer in time for final tabulation. Closing date for judging is the last day of the month in which the kink appears.

The best kink for April, according to TEXTILE WORLD reader-judges, was:

"Here's My Idea for A Loom Stop Signal System"

Louis Islas
Osorno, Mexico

Mr. Islas is being sent a check for $25 with the compliments of TEXTILE WORLD.

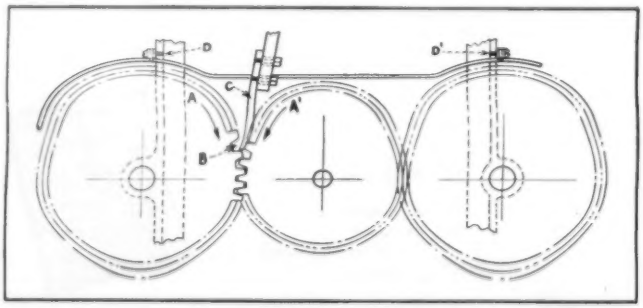
Increase Production With This Dyeing Technique

Most dyers insist on waiting until the following morning to start a new set if there is insufficient time to finish a dye lot in the later part of the daily routine hours. We have increased our dyeing capacity by at least one extra set every two days by using this method of dyeing layover.

Start the set if you have enough time to complete the first boil with the mordant, when you would sample and set the color. Wash the set clean and cut down the sewings. Lay one end of each piece back and one end front. Tie a string to each end long enough to hang over the edge of the machine at each end. Sink the goods below the surface in clean wash water, and keep them immersed over night.

When you are ready to start the set the next morning, bring the ends together again over the wheel and sew in. Run the goods for 5 min. to get them set, add the mordant, run up to a boil, and sample. If necessary, make additions to tone up the goods to the required shade. *W. E. Fisher, Uxbridge, Mass.*

Guard Protects Gears on Knitting Machines

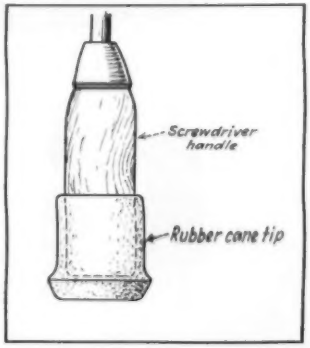


THIS GEAR GUARD designed for Scott & Williams universal frames, models K, HH, etc., will reduce breakage of gear teeth. Because the back-drum gear, A, and the intermediate gear, A', turn downward when they mesh, broken needle butts that fall on those gears when the machines are cleaned are sometimes trapped near the point marked B. These needle butts cause breakage of the gear teeth and upset the timing of the main clutch drum.

The thin sheet-steel guard that is riveted to the little cleats and fastened by screws to the machine frame at D and D' will help you avoid costly repairs and readjustments. It also prevents the auxiliary pawl, C, from catching in the gears as sometimes happens. When the pawl catches, it often breaks and gets upset.

The width of the guard can be determined by the space available between the rough or unfinished castings of the machine. Walter A. Simond, Essex Junction, Vt.

Rubber Tip Makes Handy Screwdriver Grip



A RUBBER TIP, similar to those used on canes, chair legs, or crutches, slipped over the handle of a screwdriver will make a good grip. We use these rubber tips on our screw drivers when a large number of screws must be tightened securely. These grips help the men maintain a firm hold on the screwdriver handle and help prevent their hands from getting sore. They are very valuable when you are assembling creels or on other jobs of this type. We use a light coating of shellac or cement on the handle of the screw driver before we put the tip on so that the rubber tip will be held in place securely.

Follow-thru with Leather

Cut Shuttle Cost, Stop Kinky Filling

Increase Profits

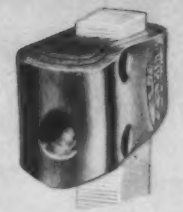
with Graton & Knight TEXTILE LEATHERS

Graton & Knight Textile Leathers present an opportunity for mill men everywhere to secure the many benefits which only leather can give.

The line includes 25 functional types for Draper Looms; 33 for Crompton & Knowles Looms. Each is an *engineered* product, it's quality controlled from green hide to the finished part: accurate – dependable – economical.

* * *

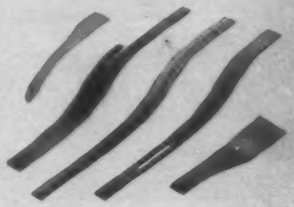
Be sure to see the G&K-DIXIE salesman, who has the complete story of why it will pay you to *Follow-thru* with the famous G&K-DIXIE Orange Line Loom Leathers and G&K Aprons and Tapes.



Pickmaster® Pickers do not bounce the shuttle, or cause the shuttle spur to heat up. Promote smooth shuttle flight and accurate boxing.

Endless Check Straps provide controlled cushioning action for the picker stick. They are positioned perfectly for each pick, and conform to the angle of the picker stick at all points.

Straight Check Straps with low permanent stretch and high resiliency promote smooth shuttle throw. Built to flex uniformly and outlive ordinary straight check straps.



Boxmaster Binder and Box Plate Leathers of special HAIRITAN® Leather with smooth, catch-free edges and deep, velvety surface. Need no waxes or fillers—do not "bleed" and discolor the filling yarn.

Leg Straps, Leg Hold-up Straps. Tough and resilient, these leathers are built to stand up to gruelling punching and whipping every second for longer periods than you imagine possible.

Harness Leathers, Heel and Jack Straps, give smooth lifting action — stand up under jolting and jerking. Their low permanent stretch retains correct lengths — their toughness resists tearing.

Spindle Bumper Straps take a beating and come back for more. Their long-life resiliency and ruggedness mean long dependable service. Patented SPIN-TEX 3-ply strap has tough fabric insert.

100 YEARS OF SERVICE TO INDUSTRY

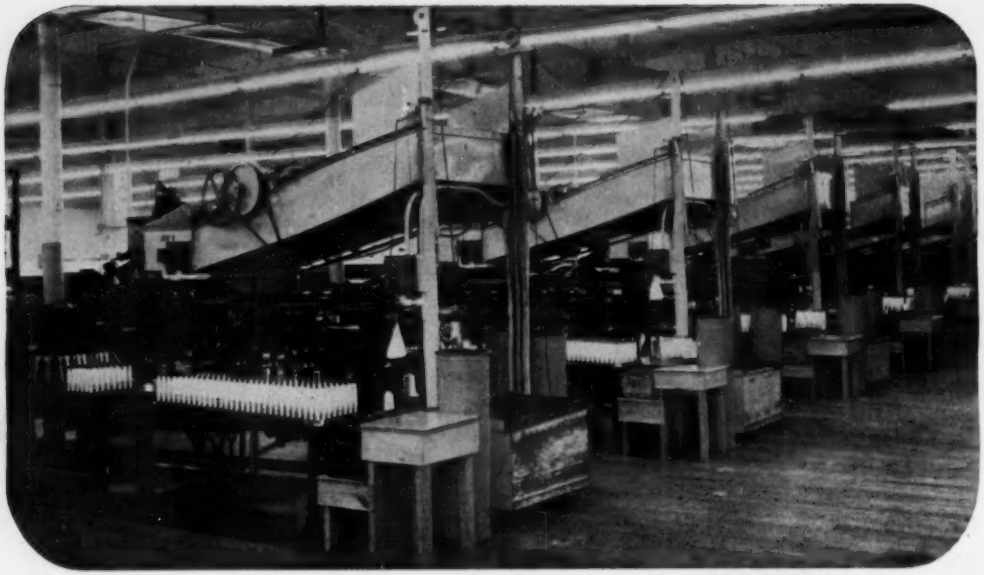
GRATON AND KNIGHT®

DIXIE LEATHER CORPORATION

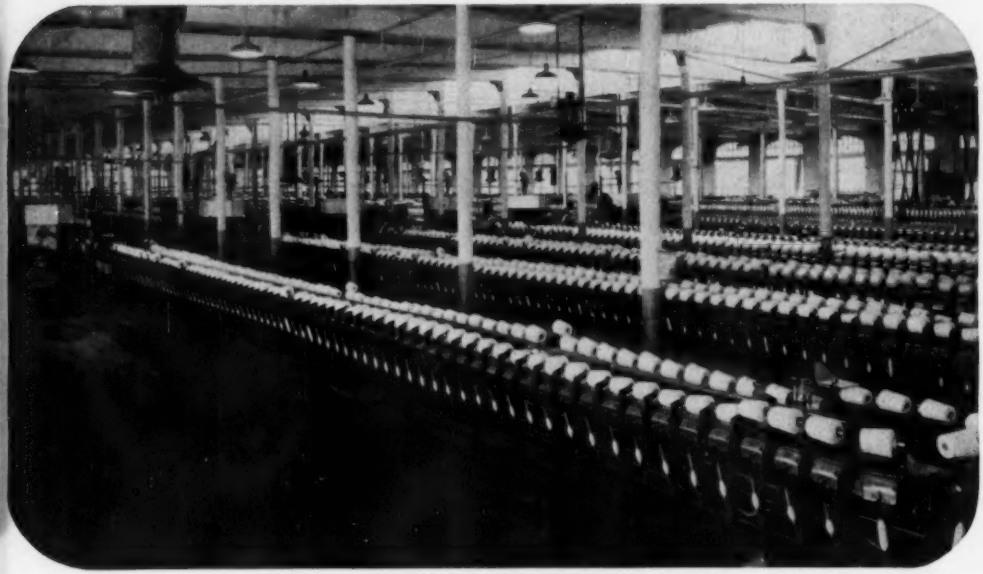
Textile Leathers

"FAMOUS ORANGE" LINE TEXTILE LEATHERS

GRATON & KNIGHT COMPANY, WORCESTER, MASS. • DIXIE LEATHER CORPORATION, ALBANY, GEORGIA *Affiliate*



Winding a better weaving loom bobbin that improves fabric quality, Abbott Automatic Quillers offer the lowest winding cost in the automatic winding field. One operator can maintain a steady production load of from 1000 to 2000 wound bobbins per hour.



With the Abbott Automatic Cone or Cheese Winder, one operator, from a seated position, sets full bobbins in a rotating magazine and doffs full packages, maintaining a steady production of from 800 to 1000 bobbins wound onto packages per hour. It's the low-cost installation for efficient twisting, warping, or sale yarn package winding.

ABBOTT MACHINE CO., INC.

WILTON, NEW HAMPSHIRE

SOUTHERN OFFICE, GREENVILLE, S. C.

Free Technical Information

Reader Service

MILL EXECUTIVES may obtain free for the asking . . .

. . . OUTSTANDING TRADE LITERATURE reviewed on the next and following pages

. . . FURTHER INFORMATION on
New Textile Equipment
New Dyes & Chemicals
New Useful Accessories
Editorial Articles
and the Advertisements

WRITE ON THIS CARD

. . . to send a Kink, a letter for Round Table, or a news note

. . . to comment on anything appearing in this issue

. . . to query the editors about any manuscripts you might wish to submit to them

. . . to send an inquiry to the Questions & Answers department

Cards require no postage . . . but be sure to give your name, title, mill connection, and address (particularly essential in the case of the bottom card).

CIRCLE NUMBERS ON THIS CARD

. . . to request copies of trade literature described on the next and following pages or to get more information on New Useful Accessories described in this issue

WRITE PAGE NUMBERS

. . . to get more information on any piece of equipment described in the Textile Equipment News section. Where more than one item appears on the page, see table of contents on page 3 to obtain an identifying letter which also must be included

. . . to get more information on editorial material appearing on any page in this issue

. . . to get more information about advertisements appearing in this issue

(If more than one editorial item or advertisement appears on a page, identify the one in which you are interested.)

Dear Editor JUNE, 1951

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Street..... City..... ( ), State.....

Please send me the following: JUNE, 1951

TRADE LITERATURE Number: F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 F13 F14 F15 F16 F17 F18 F19 F20 F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F33 F34 F35 F36 F37 F38 F39 F40 F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F54 F55 F56 F57

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NEW EQUIPMENT on page (give page number and identifying letter which can be obtained from the table of contents on page 3) .....

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ADDITIONAL INFORMATION ABOUT THE ARTICLES ON PAGES: .....

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ADDITIONAL INFORMATION ABOUT THE ADVERTISEMENTS ON PAGES: .....

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Please print or write legibly

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This Card Expires September 30, 1951

Outstanding TRADE LITERATURE *Free for the Asking*

NO REPEATS . . . Listed here for June are current bulletins reviewed by the editors of TEXTILE WORLD. To get the ones you need, circle the number on the Reader-Service card, as described on the preceding page.

PROCESS EQUIPMENT

"A Review of Textile Coloring and Finishing" is the title of a paper released by Calco Chemical Div., American Cyanamid Co. This paper was prepared by Dr. George L. Royer and reviews the important scientific contributions to textile dyeing and the trend toward specialization. **(F-1)**

Cleaning of industrial equipment with chemicals is discussed in a bulletin issued by Dowell, Inc. The bulletin outlines methods of cleaning many kinds of equipment without dismantling it, with a minimum of down time and at a low cost. **(F-2)**

Revolving joints are featured in a catalog released by Barco Mfg. Co. The catalog presents Barco revolving joints designed for steam or coal service generally in excess of 25 to 50 rpm., and as high as 2,500 rpm. in some models. **(F-3)**

Materials handling is featured in the March issue of *The Swirling Column*, published by The American Monorail Co. Described is a Monorail installation which returned 84% of its cost in one year. **(F-4)**

Bramwell feeders are featured in a bulletin issued by Geo. S. Harwood & Son. The bulletin describes the type-B Harwood Bramwell woolen card feeder, type-D Bramwell woolen- or worsted-card feeder, and the Harwood Bramwell continuous feeder. **(F-5)**

Fluorescent-lighting equipment is described in a catalog published by The Edwin F. Guth Co. Featured in this condensed catalog is the complete line of Guth lighting equipment, which includes commercial, institutional, and industrial luminaires. **(F-6)**

A rubber conservation and maintenance plan is outlined in a handbook, wall charts, and monthly bulletins released by Quaker Rubber Corp. The data outlined in the plan contain illustrations and suggestions on how to select, install, and maintain conveyor belting, flat transmission belting, V-belts, hose, and packing. **(F-7)**

SUPPLIES AND CHEMICALS

A precipitating softener and coagulator, type CM, in which energy for flow preparation is mechanical, is announced by Worthington Pump and Machinery Corp. This bulletin describes the flow circuit, diagrams the flow, and answers the main questions in a system appraisal. It supplements a previous bulletin which includes the elementary chemical theory of softening. **(F-8)**

Paper-thin stainless steel is described in a folder published by Armco Steel Corp. The folder outlines the manufacturing advantages of 0.010- to 0.001-in. thick stainless steel and shows where it has been used. Included also are typical mechanical properties of the metal. **(F-9)**

Hydrogen zeolite water softeners are featured in a publication issued by Cochrane Corp. The Cochrane hydrogen zeolite (cation exchange) softener system is relatively new. The process and the field of application of this system are outlined in the publication. **(F-10)**

Solvent detergents used to remove carbon, grease, dirt, and paint from metal surfaces are discussed in a 24-page illustrated booklet issued by Oakite Products, Inc. The booklet gives specific applications of solvent detergents in textile mills and lists the advantages provided by their use. **(F-11)**

Oil-distributing bushings are featured in a catalog issued by Moccasin Bushing Co. The complete range of Moccasin cast-bronze oil-distributing bushings are described in the catalog, and a price list is included. **(F-12)**

Waxes are featured in a set of data sheets released by Concord Chemical Co. Described are refined Concord wax 155, refined Concord wax 190, Concord wax CWB, Concord parwax, refined karagami wax, Concord aquawax, and several other waxes handled by the firm. **(F-13)**

Laminated plastics are featured in a catalog published by Taylor Fiber Co. This 62-page catalog covers vulcanized fiber, phenol fiber, and special laminates. It gives design and machining hints, and it includes engineering data. **(F-14)**

Water conditioning is featured in a bulletin published by Cochrane Corp. The bulletin describes the Cochrane liquid sludge contact reactor as a water-conditioning apparatus which operates on the principle that previously formed precipitates added in the form of sludge or slurry will accelerate reactions. **(F-15)**

Multi-purpose greases with built-in stability are featured in a data sheet issued by E. F. Houghton & Co. The Cosmolube series of multi-purpose greases, NLGI

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consistencies 1 and 2, has been developed to meet a wide range of temperatures and operating conditions. **(F-16)**

A slip-retardant floor finish is described in a data sheet released by S. C. Johnson & Son, Inc. The finish, called Shur-tred, is designed to reduce slip dangers on all types of floors and under all conditions of temperature, humidity, and maintenance. **(F-17)**

CONTROL EQUIPMENT

Water and liquid-level gauges are featured in a 24-page bulletin published by The Bristol Company. The bulletin describes instruments for measuring and recording water depth in reservoirs, elevated tanks, rivers, lakes, irrigation systems, process storage tanks, forebay and tail races, flumes, and weirs. **(F-18)**

Wall radiation is discussed in a bulletin released by Fedders-Quigan Corp. The bulletin discusses the application of wall radiation for industrial, commercial, and institutional buildings. **(F-19)**

Continuous viscosity measurement and control is featured in a catalog issued by Fischer & Porter Co. The catalog describes Viscorator instruments that provide an instantaneous method for determining viscosity values for industrial processes. **(F-20)**

Industrial air conditioning is featured in a 20-page planning guide published by Westinghouse Electric Corp. The guide outlines the five vital functions of an air-conditioning system, what to expect from an air-conditioning system, and includes illustrations of each kind of equipment. **(F-21)**

"Facts About Office Figures" is the subject of a booklet published by Remington Rand Inc. The booklet describes the operation of the Remington Rand printing calculator and shows how to use it. **(F-22)**

Continuous measurement and control of liquid density is featured in a bulletin issued by Precision Thermometer & Instrument Co. The bulletin describes the performance and characteristics of the Princo Densitrol for use in control or recording of blending, mixing, separation, dilution, and concentration of industrial process liquids. **(F-23)**

Precision switches designed for the control of alternating-current circuits in commercial and industrial applications are described in a catalog published by Micro Switch, Div. of Minneapolis-Honeywell Regulator Co. The catalog includes information on precision switches, general-purpose basic switches, reset-type basic switches, and other specialized types. **(F-24)**

"Triangle Lighting For Better Pictures" is the subject of a bulletin released by General Electric Co. This bulletin outlines and illustrates the advantages of using triangle lighting in taking pictures, and has illustrations of lighting arrangements. **(F-25)**

Refrigerating machines are featured in a bulletin issued by Carrier Corp. Described are 100 and 150-hp. reciprocating refrigerating machines which are designed for application to water or brine cooling systems. **(F-26)**

Polarized field-frequency controls for synchronous motors are described in a bulletin released by Electric Machinery Mfg. Co. This 8-page bulletin illustrates and describes in detail the standard types of polarized field-frequency synchronous motor controls for full-voltage, reduced-voltage, and part-winding starting. **(F-27)**

Identification by imprinting is discussed in a folder released by Markem Machine Co. The Imprima is a machine designed to print variable data on any card, tag, label, or ticket under 5⅝ x 6½ in. With it you can turn out imprints at the rate of 1,000 to 2,000 per hr. **(F-28)**

Production control for cotton spinning mills is discussed in a technical booklet published by Ericsson Telephone

Cash in on overhead-

space, that is — with

Clark fork-lift trucks!

For valuable tips on making savings through safety, send for a copy of Clark's newest booklet, "Safety Saves."

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AND POWERED HAND TRUCKS · INDUSTRIAL TOWING TRACTORS

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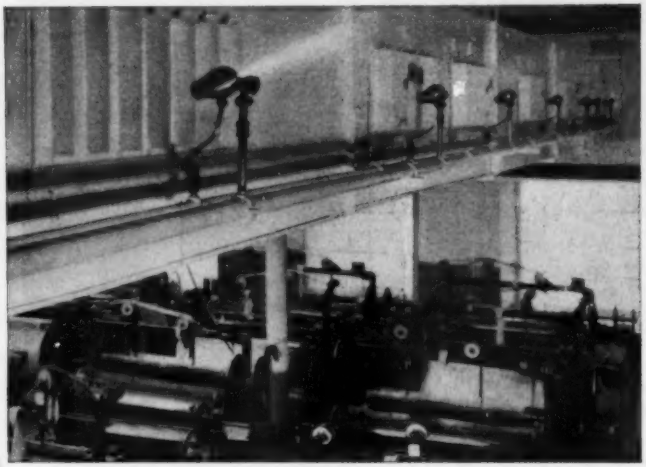
AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN PRINCIPAL LOCATIONS

You ought to know more about this Humidifying System



The GRADUMATIC humidifying system, shown to the trade for the first time at the American Textile Machinery Exhibition last May and tested and tried for five years prior to that, has fully demonstrated its value both alone and in combination with Certified Climate Airchangers or as boosters for Central Station equipment.

Unlike all previous fixed capacity "on and off" systems, the Gradumatic system delivers fog-like moisture continuously in balance with room demands. Each atomizer has a variable capacity of from 2 to 16 pounds per hour, eliminating over- and under-humidifying.

The AIRCHANGER provides adequate ventilation and circulation, maintaining uniform temperature and humidity conditions, and insuring maximum evaporative cooling.

The new gradual-acting Certified Climate Psychrostat makes all this possible. Sensitive, rugged, reliable.

More accurately controlled atmospheric conditions could help in your mill by making yarn stronger and more pliable, by increasing production and improving quality in all departments, by making the atmosphere more comfortable and healthful.

Parks-Cramer Company

Fitchburg, Mass. PARKS Certified Climate Charlotte, N. C.

Reader Service (Continued)

Sales Corp. Featured is the use of the Centralograph to record the running and stopping times and causes for stoppage on cotton-spinning machinery. **(F-29)**

ENGINEERING DATA

An electronic air cleaner is described in an 8-page leaflet issued by Westinghouse Electric Corp. The Precipitron electronic air cleaner is described in non-technical language. **(F-30)**

Motor drives for all types of large air compressors are featured in a bulletin issued by Electric Machinery Mfg. Co. Described are motor-drive requirements for reciprocating compressors, rotary compressors, and centrifugal compressors. **(F-31)**

A portable resuscitator is described in a bulletin issued by J. H. Emerson Co. The Emerson portable resuscitator is operated by a one-lever control in all phases of operation. **(F-32)**

Resurfacing of floors is discussed in a bulletin issued by United Laboratories, Inc. Plastic Rock is designed to bond perfectly to concrete, wood, steel, or brick. It is said to have tough resiliency that absorbs shock, deadens sound, and relieves leg weariness. **(F-33)**

A pump designed for a wide range of uses is described in a bulletin published by Stewart-Warner Corp. The Alemite Versatal pump can be used for handling paint, glue, adhesives, and sound insulation; for applying sealing compounds, protective coatings, gear coatings, fluid-materials handling, and maintenance work. **(F-34)**

Flexible joints are described in a bulletin issued by Barco Mfg. Co. Barco flexible ball joints are designed for use under extreme temperatures, pressures, and vacuums. **(F-35)**

Steam generators are described in a folder issued by Erie City Iron Works. The Keystone water-tube steam generators feature a compact, insulated steel case; two-drum water-tube boiler design; three-pass gas travel; automatic oil or gas burners; induced draft fans; and an instrument panel. **(F-36)**

A metallizing process is featured in *Metco News*, published by Metallizing Engineering Co., Inc. The new self-bonding Sprabond wire makes metallizing a three-step process—just clean spray, and finish. **(F-37)**

A safety valve is featured in an illustrated bulletin released by Ross Operating Valve Co. The Ross valve is said to establish new safety standards for industrial press and similar applications; all springs are eliminated and a clapper-type solenoid is used. **(F-38)**

General-purpose pumps are described and illustrated in a bulletin published by Peerless Pump Div., Food Machinery Corp. Peerless Fluidyne pumps are of the horizontal, end-suction centrifugal type. They may be driven by electric motors in sizes from ¾ to 150 hp. and have a capacity range from 10 to 5,500 gal. per min. **(F-39)**

Floating-disk clutches are featured in a new case-history book published by The Carlyle Johnson Machine Co. Maxitorq floating-disk clutches are designed for power-transmission equipment up to 15 hp. at 100 rpm. The book shows original equipment installations of this clutch in various types of industries. **(F-40)**

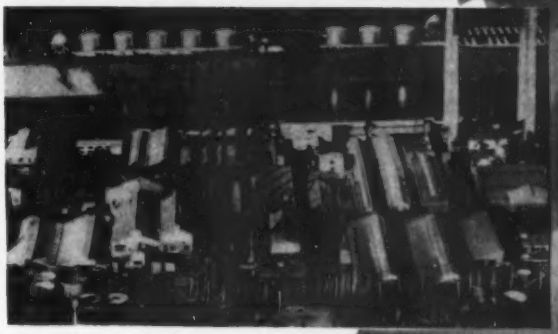
Industrial power packs for alternating-current lighting and power service are featured in a bulletin issued by General Electric Co. These power packs are designed for an incoming circuit of 480 to 600 v. with a regulated output of 120/240 or 208 Y/120 v. **(F-41)**

Welding of copper-base alloys is discussed in a reprint issued by Air Reduction Sales Co. This article describes Aircomatic® welding of copper-base alloys. It encompasses a general investigation into the weldability of several copper-base alloys with the recently de-

for consistently high-quality textile chemicals

specify

Westvaco



Modern, strategically located plants producing from basic raw materials; consistent quality-control car after car; prompt, practical Tec al Service on the most efficient handling an e of our products . . . these are reas why we continue to serve many of America's leading textile mills from Maine to the Carolinas.

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CAUSTIC SODA
Liquid 50% Standard and Rayon Grade
Liquid 70%-73% Std. Grade, Flake and Solid
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SODIUM TRIPOLYPHOSPHATE
TETRASODIUM PYROPHOSPHATE
TETRASODIUM PYROPHOSPHATE CRYSTALS
TETRAPOTASSIUM PYROPHOSPHATE
MONOPOTASSIUM PHOSPHATE
DIPOTASSIUM PHOSPHATE
TRIPOTASSIUM PHOSPHATE

OTHER CHEMICALS

SODIUM PEROXIDE
BLANC FIXE (Barium Sulphate)
CARBON DISULFIDE
CARBON TETRACHLORIDE
FIRE EXTINGUISHER FLUID
HYDROGEN PEROXIDE
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Insure Uninterrupted Loom Performance *with*

HEIM *Unibal* SWEEPSTICK

Heim Unibal Sweepsticks have reduced downtime and production losses in every mill where they are now in use.

The extra yardage produced through uninterrupted operation has been sufficient in every case to pay the initial cost of the sweepsticks many times over.

For smoother and softer pick action . . . for longer life . . . switch to Heim Unibal Sweepsticks.

This is the Heim Unibal Spherical Bearing which is assembled as an integral part of the sweepstick body. It replaces the usual loose fitting, oversize stud hole.

Write for prices and descriptive circular.

THE HEIM COMPANY

FAIRFIELD, CONNECTICUT

Reader Service ... (Continued)

veloped inert-gas-shielded metal-arc welding process. **(F-42)**

"Aluminum in Materials Handling" is the title of a booklet issued by The Aluminum Assn. This booklet consists of a collection of several articles on how the light-weight metal saves manpower and effects other economies in modern handling equipment. **(F-43)**

Fluid-power pumps, motors, transmissions, cylinders, and valves are illustrated and described in a bulletin issued by The Oilgear Co. Featured is a new line of small constant- and variable-delivery pumps, a new line of axial-piston motors, and an improved line of standard cylinders. **(F-44)**

Positive-displacement industrial pumps are described in a bulletin released by Eastern Industries, Inc. These pumps may be mounted above liquid level in the supply tank and will operate without the necessity of manual priming. **(F-45)**

Piping problems are discussed in two brochures released by the Lunkenheimer Co. The brochures are designed to help you solve your piping problems and to enable you to conserve critical materials by getting maximum service from your equipment. Described are Lunkenheimer cast steels and copper-base alloys. **(F-46)**

Pumps for processing industries are featured in a catalog issued by Yeomans Bros. Co. Presented is a full line of pumps for handling corrosive and noncorrosive liquids, solids-carrying liquids, and dry and semi-dry materials. **(F-47)**

A bronze gate valve is described in a folder issued by Jenkins Bros. The Jenkins Swingtite bronze lever-gate valve has a guided disk roller action. It is said to have a self-cleaning action and to change the seating position of the disks with each closing. **(F-48)**

Bellows manufactured of brass, stainless steel, bronze, monel, and inconel are described in a 16-page booklet published by Chicago Metal Hose Corp. Flexor bellows are made in single- and multiple-ply construction and in various lengths. They are designed for applications of control devices and instrumentation, such as regulators, valves, steam traps, shaft seals, expansion connections, and flexible connectors. **(F-49)**

Megger ground-testing instruments are described in a bulletin published by James G. Biddle Co. Megger ground testers measure resistance of earth-to-ground connections and measure earth resistivity. The bulletin contains aids to proper selection and application of ground testers, drawings and illustrations designed to help make grounding surveys, and aids to the problems of electrical power and communication grounding. **(F-50)**

Good Plant Design

(Continued from page 145)

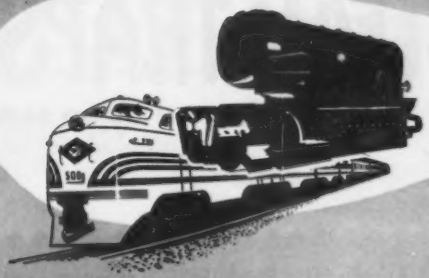
sible. When properly used, exchangers pay for themselves in a short time.

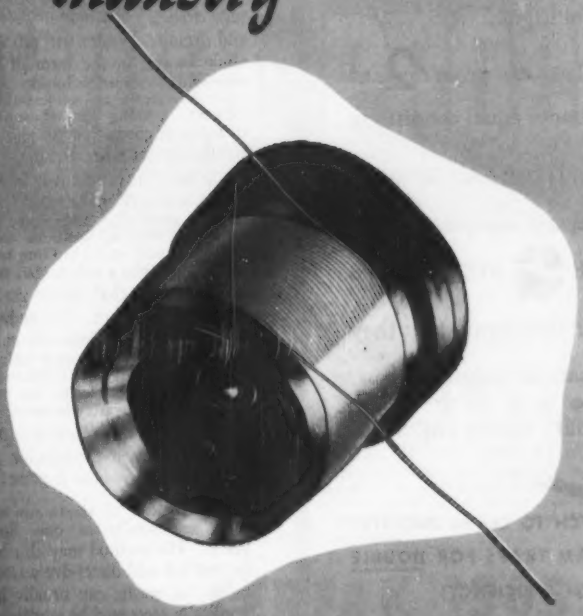
Because of the large demands for steam in the average operation, either water-tube or fire-tube boilers should be considered. The final choice depends on the particular installation.

Don't Dump All Waste Chemicals Together

The treatment of the various dye and chemical wastes is becoming increasingly important. With more states passing anti-pollution laws, and with local municipalities becoming

giant steps in industry





Above is one of the most progressive achievements ever to come from the hand of man—the diesel engine! In 1934—the first diesel-powered locomotive was introduced. Today—18,000 are in operation. Diesels run 500 miles without a single stop for fuel or water... require less man-power, fewer repairs. They cut operating costs tremendously... and revolutionized the railroad industry.

At your left you see an equally remarkable mechanism... Industrial Rayon Corporation's "thread advancing reel," an important element of the renowned Continuous Spinning Process... herald of a new day in the rayon industry. On this reel I R C produces a virtually flawless yarn in miraculously little time. Yarn so uniform it set a new standard of quality for mills, cutters, converters throughout the entire world. A process so valuable it has been adopted by producers in Great Britain, France, Switzerland and other leading countries. A process so far ahead of its time, that today, 12 years after its introduction, it still remains unsurpassed.

I R C is proud to have created this spectacular "thread advancing reel." If and when another rayon miracle appears... chances are, I R C will have a hand in its development!

IRC Industrial Rayon Corporation

Cleveland, Ohio • Sales Office: 500 Fifth Avenue, New York 18, N. Y.

A SHORT STATEMENT ON

STEAM TRAPS

THAT IS LONG ON GOOD SENSE:

A Steam Trap has but *one* function—to drain condensate from steam lines. Right?

Now if one brand of Steam Trap can drain *twice* as much condensate [$] [$] = [$] under equal conditions,

as another of the same size and price—it's just plain common sense to buy that brand, isn't it?

Clark DUO-STEP LEVERAGE STEAM TRAPS have proved in tests time and time again that they *can* drain *twice* the condensate of ordinary traps.

So—do as thousands of smart steam engineers have done:

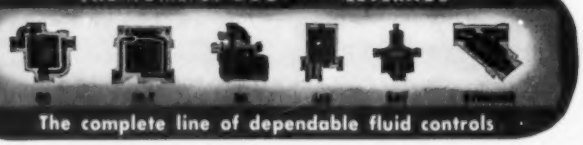
SWITCH TO CLARK DUO-STEP STEAM TRAPS FOR DOUBLE DRAINAGE EFFICIENCY!

THE CLARK MANUFACTURING COMPANY

1835 East 38th St. • Cleveland 14, Ohio

Clark

THE HOME OF DUO STEP LEVERAGE



The complete line of dependable fluid controls

alarmed over water shortages, the ban on dumping of raw sewage and effluent into our rivers and streams will soon be rigidly enforced.

In approaching this problem, careful studies should be made of:

1. Process chemicals and dyestuffs that must be treated as waste.
2. The least expensive method of treatment.
3. Waste chemicals that may be economically recovered for subsequent use.

One trend is not to dump all waste chemicals together before treatment. For economy, it is generally better whenever possible to treat each waste chemical separately. Other effluents should be introduced so that one precipitates or oxidizes the other.

For example, a typical finishing plant may have among its operations mercerizing, continuous bleaching, and dyeing. Wastes will probably include caustic in the form of sodium hydroxide, sodium sulphide, and sulphur dyestuff as undesirable raw effluents. Along with these, a small quantity of chrome acetic acid, for fixing the dye, may be available. Of this group, only the caustic may be successfully recovered when used in large enough quantity. Therefore, the dye liquor containing sodium sulphide may be passed into a holding tank and from there into a submerged combustion chamber that burns gas mixed with compressed air. The sodium sulphide breaks down into sodium hydrosulphide with low-enough pH to precipitate out most of the dyestuff. The effluent then passes to an overflow tank where the waste chromate bath is introduced to oxidize any residual dyestuff. From there the solution goes to a settling tank, where it passes into a stream or river.

This method of treatment is being used successfully in one Southern plant. The method may also be used to treat vat- and direct-dye wastes. The caustic, as waste, can usually be economically recovered by multiple evaporators and brought back to concentration for re-use in the mercerizing range or for use in bleaching. Any caustic, as waste, may be treated in the submerged combustion chamber.

Chemicals Handling and Mixing Can Be Automatic

In today's modern finishing methods there is no place for the old-fashioned chemicals-handling systems. Chemicals are now mixed to an accurate degree, and automatic controls feed these chemicals to the processes continuously in precise quantities. For this reason, chemical handling and storage is extremely important and must be engineered to insure mini-

Houghton offers you the Ideal Combination for improved

WOOL PROCESSING

SULFOL 448...

NEW NON-IONIC STOCK LUBRICANT which emulsifies readily in any proportion of water, at almost any temperature. It won't gum, stain, or become rancid. It is moisture-free and non-corrosive. Houghton Sulfol 448 is already being widely used by mills making every type of wool and worsted yarn . . . replacing many expensive oils previously used in processing.

CERFAK 1305...

WIDELY USED SYNTHETIC DETERGENT for effective scouring of woolen and worsted yarn fabric and for raw wool scouring. Cerfak 1305 is not affected by hard water conditions. In concentrations as low as a 0.05% solution, it scours better and cleaner than any detergent on the market. Cerfak 1305 and Sulfol 448 will insure efficient and economical operation from carding to scouring.

HAVE YOU RECEIVED . . .

a handy Houghton chart which helps you choose the agent with detergent and/or wetting properties for specific applications? We'll gladly mail a copy along with complete information on Sulfol 448 and Cerfak 1305, on request. Write or call E. F. Houghton & Co., Philadelphia 33, Pa.

. . . products of

E. F. HOUGHTON & CO.

PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .

Stehedco and Southern

LOOK FOR
STEHEDCO and SOUTHERN
TRADE NAMES THAT LEAD THE FIELD
IN QUALITY

Over 200 U.S. Patent grants justify the pride of this company in its many contributions to the textile industry. Mills the world over know the advantages of the standards in Quality and Service set by the trade names STEHEDCO and SOUTHERN. Tracing briefly the early developments which led up to these standards, they find that the early pioneering efforts of this, now, huge organization, have culminated in accomplishing its many objectives.

Through its constant research and experimentation it has brought about many major changes and improvements in loom harness equipment and will continue to seek future improvements, through constant research and development of new materials, designs, construction and methods.

Products that "Weave the World's Needs!"

mum labor and upkeep and maximum efficiency.

Take, for example, the handling of common salt, which is used for exhaustion of dyes, regeneration of water softeners, and other operations. The modern finishing plant never sees salt after it leaves the rail hopper car, yet there is always a readily available supply of brine solution. Simply opening a valve brings the brine to whatever point it is needed at inside the plant.

Cost of Handling Is Fertile Area for Savings

Handling constitutes up to 60% of the total producing cost. Much consideration must be given to this subject, and construction and facilities should provide for maximum operating economy.

The finished-goods-storage location must be determined by considering shipping facilities and accessibility of the bleachery to the packing area. Shipping involves both railroad and trucking facilities. Frequently, mechanical conveyors may be profitably used to minimize construction costs that would be entailed in providing centralized truck and railroad loading.

After one determines the desired shipping facilities, the method of loading the carriers must be worked out. It depends on the character of shipments whether trucks should be loaded by warehouse personnel or by the truckmen. Do shipments have to be arranged by destination in the carrier, or do they all go to a terminal for arrangement? These and many other problems must be given individual consideration. The payroll cost of handling must always be minimized.

Adequate space should be provided for proper maneuvering in front of the docks, as well as for plenty of headroom under canopies. Information published by the trucking associations gives the space required to dock, overhead clearances, and height of the loading dock above the drive.

Plant location and climate will dictate whether loading can be done outside or not.

In addition to the previously discussed building details, a finished-goods warehouse has certain peculiar requirements that must be adequately provided for.

Most finished-goods warehouses are sprinklered. In a multi-story building, protection must be provided against water leakage through the floors, not only in case of fire but also in case a head goes off accidentally.

If gasoline-driven lift trucks are used, or if trucking is done in an enclosed area, proper ventilation facilities must be installed.

Ordinarily, heating requirements are

based solely on comfort zones for working.

Electrical-lighting layout will be governed by aisle arrangement, height of stacking, and foot-candle requirements for the work to be done.

Steam-Generating Plant

(*Continued from page* 117)

It has a 93-ft. 8¾-in. centerline, handles about 10 tons per hr., and is equipped with a single strand of No. 50 alloy-steel chain with 12x7-in. steel buckets every fourth link. The plant uses about 1,000 tons of coal a week during normal operations. Coal used is the highly volatile Virginia type that can be crushed to dust and blown into the boilers.

Big advantages in this automatic coal-handling installation are the large amounts of coal that can be stored over the vibrating hopper and the relatively dry coal in the center of the pile that is automatically carried to silo storage. The circulation from dead to live storage prevents caking and provides a constant supply of moisture-free coal for the boilers.

One operator controls all coal from the time it arrives by rail and is dumped into the track hopper. Live storage is regulated according to plant demands. Coal from the silo flows by gravity to the vibrating scales that record each 200 lb. dumped through the Seco distributor into the coal hopper located above the Westinghouse stokers. A Stets water regulator controls the water level in the boilers.

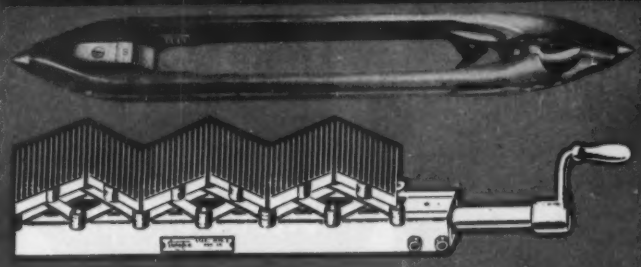
An expansion problem between the boiler and the stack was solved by Mr. Stevens by the installation of a unique bellows expansion joint between the induced-draft fan and the stack base. Thus no strain is imposed on the stack; and the breeching is dust-tight, a condition not always found with the ordinary slip joint.

Processing water is obtained from lakes on Graniteville property. It is treated with caustic soda, sulphite, and phosphate. A continuous blowdown and heat-exchanger system holds boiler concentration within recommended limits.

Careful Maintenance

The plant was designed with its combustion controls and other automatic devices for the purpose of low operating and maintenance costs. All equipment is inspected during each shift, and tests are made each hour to insure constant efficient adjustment. Boilers are closed down during the vacation period and given a general overhaul. Minor adjustments are made

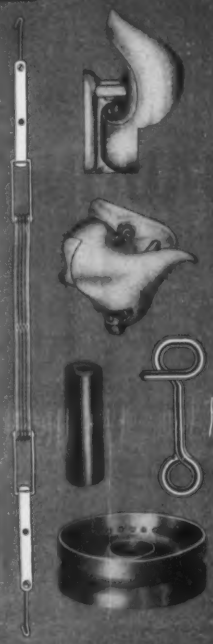
Stehedco and Southern

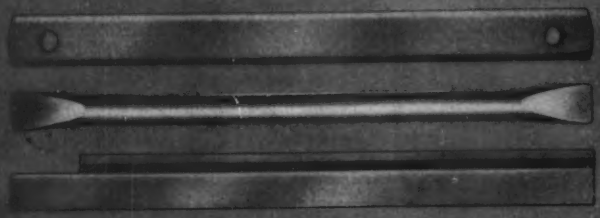


LOOK FOR
STEHEDCO and SOUTHERN
TRADE NAMES THAT LEAD THE FIELD IN SERVICE

The service obtainable from the loom harness manufacturer is as important to the mill as product quality. The Steel Heddle Manufacturing Company, not content with producing better loom harness equipment and accessories, has made every effort to provide the most efficient and economical distribution and service possible. The location of their many large plants and branch offices has been strategically planned for the benefit of the textile industry.

Competent staffs of Field Engineers are maintained for the express purpose of assisting with mill problems. These men appreciate new applications; they understand what successful product performance means.





STEEL HEDDLE MFG. CO.
2100 W. ALLEGHENY AVENUE PHILADELPHIA 32, PA.
Other Offices and Plants
Greenville, S.C. • Atlanta, Ga. • Greensboro, N.C. • Providence, R.I.

SOUTHERN SHUTTLES Paris Plant... Greenville, S. C.
A Division of STEEL HEDDLE MFG. CO.

STEEL HEDDLE COMPANY OF CANADA, LIMITED
310 St. Hubert Street Granby, Quebec, Canada

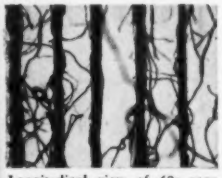
Products that "Weave the World's Needs!"

INSPECT the Photomicrographs

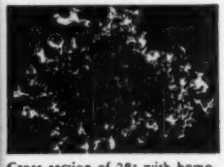
They Show That

GAULIN HOMOGENIZERS

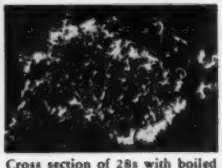
Longitudinal view of 40s yarn coated with homogenized size. Notice the exceptional degree of fibre lay.



Longitudinal view of 40s yarn with boiled size. Note the irregular degree of fibre lay.



Cross section of 28s with homogenized size. Size coating and penetration is uniform throughout.



Cross section of 28s with boiled size. Note the heavy and thin size deposits.

...Improve Size Quality Assuring Better Yarn Penetration and Stronger Yarn ...Keep Production Up

Take a look at the illustrations at the left, they conclusively prove that Gaulin Size Homogenizers enable you to prepare a better size, improve yarn quality and step up loom production.

Records in mills everywhere provide additional proof that Gaulin Homogenizers reduce the amount of starch and softeners required, minimize shedding in slashers and looms, reduce cooking time, permit higher slasher feeds and increase loom efficiency . . . all adding up to greater savings and more production.

Get the full facts, today. See for yourself how you can profit with Gaulin Size Homogenizers.

Gaulin

Manton Gaulin Manufacturing Company, Inc.
52 GARDEN STREET, EVERETT 49, MASS.

over the weekend on one boiler while the other is carrying the load. Boiler tubes are cleaned and turbined once each year.

A visitor to the plant is immediately impressed with its cleanliness. The building is roomy, and equipment is spaced so as to make everything easy to clean. Aluminum paint and sidewall floodlights provide good illumination.

Mr. Stevens has proved that a coal-fired steam-generating plant can be free from dust and kept clean. Advantages resulting from such a condition extend even to the spinning and weaving mills that utilize the steam-plant output.

Vinyl-Coated Fabrics

(Continued from page 137)

ber, where the vinyl coating is fused into the fabric in a continuous film at a temperature of 400 to 425° F.

After remaining in the drying and fusing chambers for about a half-minute each, the fabric then passes through a 20-ft.-long cooling range into which air at room temperature is constantly blown to provide even cooling and to remove any remaining volatile gases. From the delivery end, the coated fabric is doffed for inspection and is then rolled and packed for shipment.

Points To Remember

Because vinyl-resin coating is of the dispersion type, great care must be exercised to keep the process running continuously. Any stop of two minutes or more means that the coating knife and other parts of the machine clog up and must be thoroughly cleaned before operations can be resumed.

The maintenance of temperature control and air flow in the oven is most important. Since the greatest amount of concentrated vapor comes off in the drying zone, the flow of air in the oven runs counter to the flow of fabric.

The temperature of the air blown into the cooling range is raised somewhat as it passes over the fabric. The air then passes through a gas-fired heater, where its temperature is raised sufficiently for use in the fusing zone. Leaving this section of the oven, the air is mixed in certain proportions with outside air to lower its volatile matter, is further heated, and is then blown into the drying zone. From this section, the air, now thoroughly saturated with volatile matter, is exhausted to the outside.

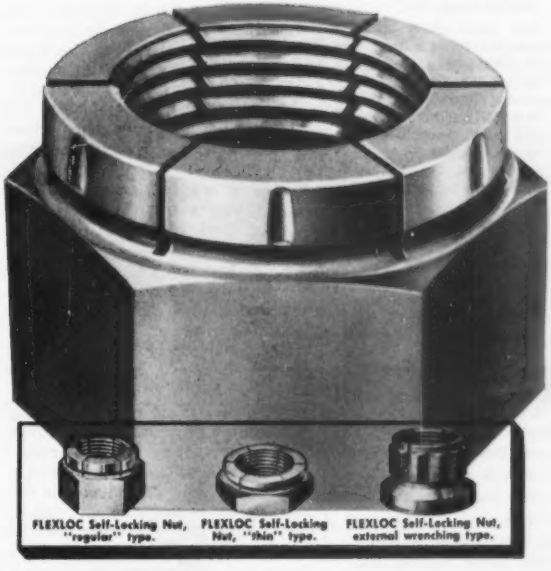
Painted Fabrics

The Woodhead operations also in-

FLEXLOC®

SELF-LOCKING NUTS

STAY TIGHT AFTER 171,060,000 VIBRATIONS AT 4,000 CYCLES PER MINUTE



FLEXLOC Self-Locking Nut, "regular" type. FLEXLOC Self-Locking Nut, "thin" type. FLEXLOC Self-Locking Nut, external wrenching type.

Plain nuts with lock washers loosened after only ONE HOUR of 4000-cycle-per-minute operation on the vibrator of a concrete block machine at the plant of the Bethayres Concrete Block Co., Bethayres, Pa.

When FLEXLOC Self-Locking Nuts were installed, they were *still tight* when the machine was torn down for rebuilding after 6 weeks operation—at 4000 C.P.M., 17 hours a day, 7 days a week!

So if you have an application where plain nuts might or actually do loosen and back off, try ***FLEXLOC, the one-piece, all-metal STOP-and LOCK-NUT "that won't work loose."***

Send for Bulletin 619-A today.

SPS STANDARD PRESSED STEEL CO.

JENKINTOWN 35, PENNSYLVANIA

"Never leave that till tomorrow which you can do today."

—Ben Franklin's Almanac, 1757

If waste and inefficiency ruin thee and thy country today, how shall thee profit by finding a horseshoe tomorrow?

—Acme Steel Notebook, 1951

The Acme Steel steel strapping and wire stitching equipment you have today means efficient and thrifty production in your packaging, shipping and materials handling operations. Protect it well.

In spite of an increase in productive capacity, U.S. military requirements on some products make it impossible for Acme Steel to meet all the requirements of our more than 50,000 customers. To make the best use of Acme Steel flat strapping, stitching wire and other products available to you, let our representative put Acme Steel's experience and ingenuity to work for you.

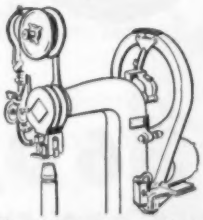
In the past 71 years, we have helped our customers weather many a difficult period. We are ready and willing now to help you keep your tools on the job or develop new setups that will increase efficiency in your operations and minimize waste.

Information for ready reference on Acme Steel products is available upon request.

ACME STEEL COMPANY

Dept. TEX-61, 2838 Archer Avenue, Chicago 9, Illinois

We have 46 service offices in the United States and Canada. If not listed in your telephone directory, write us.



Five things you can do to keep your Acme stitching machines on the Job!

1. Clean and oil every day.
2. Never operate stitcher without material in stitching position.
3. For perfect stitching, check work regularly. If in doubt about any operating difficulty, refer to service manual (additional copies sent upon request) or submit stitched material, identified by machine type and serial number, to Customer Service Department, Acme Steel Company.
4. From time to time moving parts need replacement—keep a supply on hand to make quick, minor replacements.
5. Ask us about the Acme Steel "3-WAY SERVICE PLAN" for equipment repairs.

ACME STEEL CO. CHICAGO

ACME STEEL

In 1950 Acme Steel had 9135 stockholders—a growth of 21.1% over 1949. They comprised 3223 men, 3089 women, 2260 joint accounts, 563 trusts, corporations and institutions. 646, or 15.9%, of our employees are stockholders.

ACME STEELSTRAP flat steel strapping and ACME UNIT-LOAD carload bracing BAND, SEALS and TOOLS • ACME SILVER-STITCHERS and ACME SILVERSTITCH WIRE for box stitching • ACME-MORRISON METAL STITCHERS and BOOK STITCHERS • ACME-CHAMPION BAG STITCHERS • ACME HOT AND COLD ROLLED STRIP STEEL • ACME GALVA-BOND steel slat stock for Venetian blinds • ACME STEEL SPECIALTIES, including hoops, corrugated fasteners, barbed box straps, nail-on strapping and other container reinforcements • ACME STEEL ACCESSORIES—snips, tool mounts, reel stands, coil holders, coil trays.

clude application of oil paints in both stripes and solid colors to duck fabric and the application of lacquer-type formulations to drill fabrics in various striped patterns. This work is done on a festoon machine. Several new developments and special equipment have been applied to this machine by the Woodhead division, and it can now produce a very high quality fabric.

It is necessary that paint material be thoroughly strained to remove even the fine particles; otherwise the small particles are likely to cause streaks in the finished fabric. This precaution is especially necessary in vinyl coating.

Another important factor that enters into production of an even coating and a high-quality end product is the careful machining of knife blades on each machine to a very close tolerance. Such close machining gives uniformity of finish and equal penetration and binding across the whole width of the fabric.

It has been found that proper tension control of the fabric as it is processed through the painting or coating section is also of great importance. Obtaining this uniform tension requires constant attention and adjustment and the alertness of a skilled operator. Such control is mandatory if the proper weight of coating is to be applied uniformly, whether with solid colors or with stripes of several colors.

Festoon Machine

Eight colors can be applied at the same time on the festoon machine. Special nozzles have been developed by the plant engineers for the application of the paints or other materials.

After painting is completed, the fabric is hung on a loop dryer, which is 500 ft. long and whose temperature averages up to 200° F. It requires about four hours of drying to obtain the best results with painted fabrics.

There are four stages in the drying machine, three of heating and one of cooling. Temperature is kept at 150° F. in the first stage, 180° F. in the second, and 200° F. in the third. From the third drying zone, the fabric passes to the cooling chamber and its temperature is brought down to room level.

Speed of the painting and coating processes is regulated according to type of fabric and type of coating. The coating formulations are the result of a great deal of experimental work in the selection of proper pigments, plasticizers, stabilizers, and other material that give highest quality coatings. Research and development of materials and equipment along this line is a continuing process with the Graniteville organization.

Guaranteed

THE QUALITY OF BOGER & CRAWFORD KNITTING YARN IS GUARANTEED — THE HIGHEST TRIBUTE WE CAN PAY IT.

Signed Frederick Boger

Quality Yarns

. . . A Guarantee That Has Held For 44 Years and

. . . Is Doubly Important In The Present Emergency

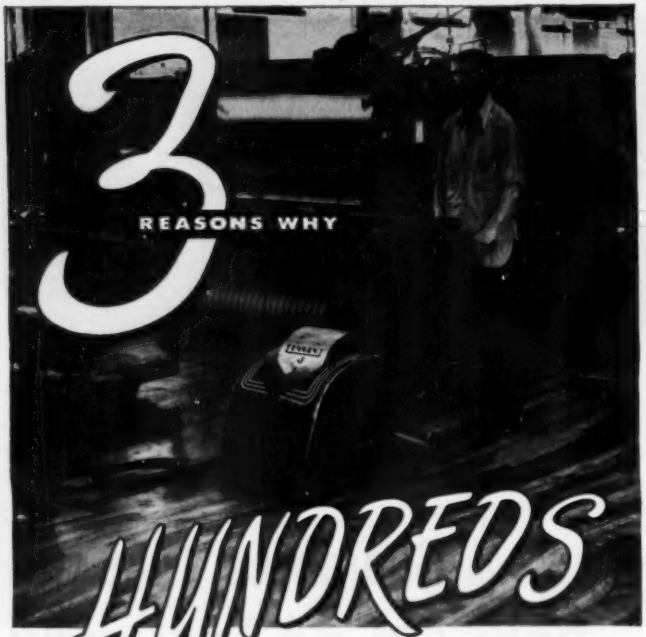
Let Boger and Crawford yarns help you produce a product of merit! You are called upon in the National Emergency to do the best possible production, and here Boger and Crawford yarns can help you

With every order you are protected by our guarantee of quality. Industry over the years has constantly used Boger & Crawford's product, and because of the constant accuracy of performance, we are looked upon with confidence.

Specify Boger & Crawford Vitamin "Q"—"Q" for Quality—yarns without delay.

Boger & Crawford

BOGER CITY, N.C. • PHILADELPHIA, PA. • BOSTON, MASS. • CLEVELAND, OHIO



HUNDREDS
OF MILLS USE THE
TENNANT System
OF FLOOR MAINTENANCE

Its cost-saving performance and ease of use have established TENNANT as *THE accepted floor maintenance system of the U.S. textile industry.* This unique acceptance is due to these practical advantages . . .

1. CUTS FLOOR MAINTENANCE COSTS

You save 4 ways—in *manhours*, by cleaning faster in one operation with 1 man; you cut *accident costs* by DRY-cleaning (no wet, slick floors). You avoid needless *floor repair costs* . . . and reduce *stock losses* from snags, splinters and soilage.

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Works like magic! You get rid of dark, rough, oil-soaked fibers . . . and have a smooth, bright, *hardened* floor surface that resists dirt. Stays clean longer! Ends costly, harmful scrubbing and wet-mopping.

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Your TENNANT System is individually selected and planned, 100% *specialized* for your mill. Assures you of best results. Personal installation and periodic inspection . . . *without charge.*

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Creators of the TENNANT SYSTEM OF FLOOR MAINTENANCE—Manufacturers of Equipment & Materials for MAINTENANCE OF FLOORS, DECKS, ROOFS, HIGHWAYS

Pointers for Supervisors

(*Continued from page 170*)

phrase if a concrete and personal one is better. And it almost always is! "It is said" may cover a multitude of sins, but "Mr. Smith (or Mr. Jones or Mr. Brown) said" brings a real person into the picture, along with the human element. Most people, your employees not excepted, are more interested in other people than they care to admit.

It's hard to do, but if you can, stay away from trite phrases and clichés. A new twist will keep a reader awake and reading. If he is continually running into "the same old stuff," you can't blame him much if he stops before he gets to the end. Putting a new idea in old clothes is an almost sure way to make it lose its punch. And remember that many of the most-quoted sayings are nothing but old ideas expressed in a novel way.

Active verbs are another way to keep your writing direct and forceful. Don't tell your workers that "a new production development has been found to be effective." Tell them "it works!" Don't forget the old newspaper-man's rule of Who, What, When, Where, Why, and How. Chances are the reader wants to know.

These ideas are only a few of the most obvious ones that will help make your company publications more effective in spreading the word to your employees. We hope you'll try putting them to work for you. If you want to go further, get a copy of Flesch's book and see what it can do for your style, for your employee relations, and for your company's losses on waste paper.

18-oz. Serge Weaving

(*Continued from page 105*)

used. Keeping the drop wires free from lint is often a problem when warps are tied in instead of replaced with a new warp.

HARNESS STOP MOTION. Harness stop motions will prevent harness skips when a harness wire or strap breaks. Without a stop motion, the loom may run for some time with a strap broken. Such running causes an imperfection or a long pick-out.

There are a number of different types of harmless stop motion. Most of them work from the electric warp stop motion. A rectangular-shaped frame made of 4-in. round cold-rolled steel, insulated and fastened to the frame of the loom, may easily be constructed. A wire is run to the warp

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a CONCENTRATION CAMP!

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nullify { SCUM, WASTE, RANCIDITY, CLOUDINESS, DISCOLORATION } *by sequestration*

Magnesium, calcium (lime), iron, copper, zinc, nickel, chromium and lead... these are the more common, *interfering metals* — interfering with processes in which water is involved, impairing the quality of the products thus processed.

Through *sequestration* — with the help of an Antara Nullapon — the action of these metal ions can now be nullified. To all practical purposes, they are locked up in an inert complex.

The applications thus far established for the Textile Field include: softeners for hard water; clarifiers for liquid soaps and solutions; antioxidants for fats, oils, soaps and softeners; foam builders for soaps; sequestrants for polyvalent metal ions; solubilizers for dyes and pigments; dyeing assistants for metal-sensitive dyes, hard-water-sensitive vat dyes and naphthol dyeings; removal of lime soap and/or metals from textiles.

For Technical Bulletin — and for information regarding our new test kits for determining water hardness — we invite your inquiry, addressed to Dept. 71.

*"NULLAPON"—Reg. U.S. Pat. Off.

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stop-motion solenoid, which stops the loom when a harness wire comes in contact with the frame.

All whiprolls should be adjusted so that they are level and the same height as the breastbeam. If the whiproll is high, the top shed will be loose and will cause an excess of the warp to show on the face of the cloth. If it is low, the action will be reversed. If looms are allowed to operate with whiprolls set differently, the appearance of the finished cloth will vary.

Take-up rolls must grip the cloth and not allow it to slip. Good take-up rolls are necessary to insure that the picks per inch do not vary in the same or in different looms. Looms with take-up rolls covered with rubber must be checked carefully.

In re-covering perforated steel take-up rolls, the steel must be put on the roll so that the pull will be downward. The difference of pull can be easily determined by running your hand over the steel. In one direction, the steel will pull at your hand; in the other direction, only roughness will be felt.

Most mills find that best results are obtained when the eccentric gear is set for a slow-motion starting at protection. It is also important to have all harness cylinders set alike on all looms. Looms running with the harness motion changing at different points will not give uniform results.

Georgia TOE

(*Continued from page* 111)

Mill X: We have 70 frames of Shaw spinning equipped with Torrington needle-bearing top rolls in front and middle lines, and with nylon back saddles. We have fewer ends down per thousand spindle hours and as good or better quality of yarns in evenness and breaking strength. We get less oily yarns since there is practically no oiling required. We have already run some of these rolls 15,000 hr. successfully before oiling.

Mill Z: We have several frames equipped with the ball-bearing top roll. We have fewer ends down and fairly uniform yarns from these frames. The advantage of not having to oil the rolls is a big help in keeping the yarn from being soiled by oil on the roll.

Mill CC: We had one frame with ball-bearing top rolls that we ran for 18 mos. before we moved them to the back line. During this time we did not have any fewer ends down, although we did make slightly cleaner yarn.

Five mills reported unsatisfactory

The chemical structure shown at left framing the trees represents cellulose in the language of chemistry. Most of the highly purified cellulose used in this country is derived from wood.

RAYONIER RESEARCH
in cellulose chemistry has made a major contribution to the rapid growth of the chemical textile fiber industry.

The basic raw material used in the manufacture of viscose rayon and acetate yarn and staple fiber is highly purified wood cellulose derived by chemically processing trees.

Our research efforts over a period of years have resulted in production of a number of types of purified wood cellulose specially developed to provide superior characteristics required by our customers for making the various types of yarn and staple fiber.

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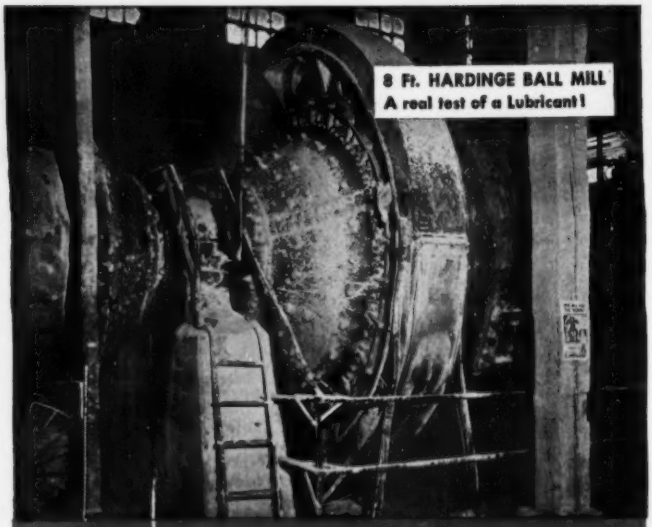

"LUBRIPLATE No. 630-AA is practically a universal lubricant"

—so writes the SPOKANE PORTLAND CEMENT COMPANY of Irvin, Wash.

"**Lubriplate Lubricants** enabled us to cut the number of lubricants we were using to about half, but even then we were still using five different LUBRIPLATE Products. With the introduction of LUBRIPLATE No. 630-AA, we were able to reduce our requirements still further. Today we are satisfying all our needs for solid type lubricants with only two LUBRIPLATE Products. LUBRIPLATE No. 630-AA might almost be considered a Universal Lubricant. Furthermore, LUBRIPLATE No. 630-AA has effected a marked savings in lubricants and labor."

Frank D. Neill
General Superintendent

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LUBRIPLATE *THE MODERN LUBRICANT*

experience with nylon top saddles. One mill reported a saving in oiling, and one mill reported less oily yarn. Only one mill implied satisfactory experience with nylon saddles. In connection with nylon or metallic oilless top-roll cap bars, four mills reported unsatisfactory experience. One mill reported more even yarn.

Mill C said: "The experience we have had with nylon cap bars is good so far, but that is to be expected when putting on new cap bars to replace worn ones. We had a 6% increase in breaking strength and a 4% decrease in ends down per thousand spindle hours. The cap bars are showing signs of pressing away from the ends of the top roll. We have been using these about 16 mos."

Mill Q: Nylon bars are satisfactory if oiled once per month. This is a reduction in the oiling schedule of from 12 times per month to once per month.

Converting to Large Warp Bobbins

Question: (a) What experience have you had converting, for example, from 9¼-in. bobbins to 10¾-in. bobbins on warp spinning? Was it necessary to use a larger and heavier spindle? Is it practical to butt-weld an extension on the blade? Is it better to use an adapter and paper bobbin? Give details on yarn number, front-roll speed, twist multiple, ring size, and ends down.

(b) What are the limitations on Barber-Colman spooling in changing to the large warp bobbin?

Answers:

Mill C: (a) We bought a roller-bearing spindle that takes a 9¼-in. tapered paper-tube bobbin to replace spindles that carried an 8¼-in. wooden bobbin. We are running these on an H&B 4-roll long-draft frame using a combination build with a 5¾-in. stroke.

We have 2¼-in. rings, 16s yarn, 145-rpm. front-roll speeds, 4.75 twist multiple, reverse twist, 25 ends down per thousand spindle hours.

(b) We have trouble on the Barber-Colman spooler with the 9¼-in. tapered paper bobbin. We have more trouble with this bobbin sloughing than we do with the 8¼-in. wooden bobbin. We do not know for sure whether it is the tapered bobbin or the length of the bobbin that causes the trouble.

Mill F: About 6 mos. ago we changed a group of frames from 9¼-in bobbins to 10¾-in. and used the same spindles on 2¼-in. ring, 4-in. gauge, 14.00s warp, 4.75 twist multiple, and approximately 35 ends down per thousand spindle hours.

We increased the outside diameter

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y. June, 195

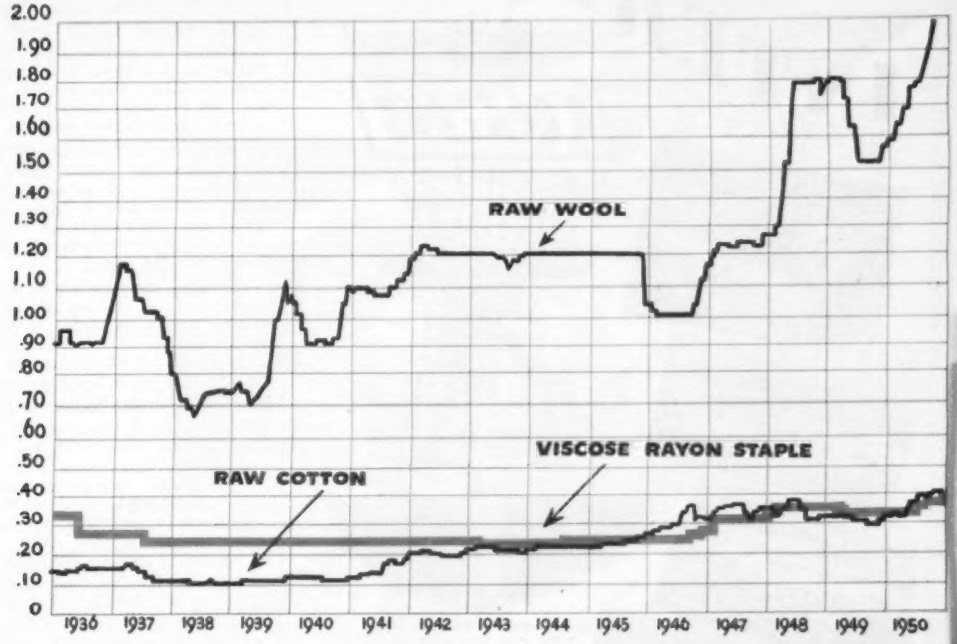

Chart Demonstrates Price Stability of Rayon Staple

Rayon's history of consistent price stability is graphically presented on the above chart. It shows that through depression, recession, war and peace man-made rayon's prices have been relatively proof from fluctuations caused by nature or man. This stability has played a part in the growing importance of rayon and its successful entry into so many divergent fields. It is believed that few products can show as stable prices over a similar period of years.

This chart, based on data in "Rayon Organon", is reproduced for wider circulation to those interested in modern textiles.

RAYON 20 YEARS AGO

NEW YORK, June 1931 – The Viscose Company enters the acetate field with a new yarn called "Seraceta."

CHICAGO, June 1931 – Plans are being made to feature rayon fashions at the forthcoming Chicago World's Fair.

ROANOKE, VA., June 1931 – The textile market is picking up. The Viscose Company plant here has added five more hours to its work week.

MAKE USE OF *Avisco*® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

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The Mellor Bromley range of top-line machines covers most classes of underwear and outerwear fabrics and garments. Send for illustrated leaflets of the types in which you are interested.

Here are five of the principal plants of the Mellor Bromley group in England, employing some 3,000 workpeople—many with 25, 40 and 50 years service.

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of the bobbin from 1⅛ to 1⅛ in. and had the bobbin excavated as much as possible to reduce the total weight. The spindle ran somewhat warmer, but we did not change oiling frequency.

To offset some shakiness in the running of the spindles, we changed the viscosity of the oil from 60 to 80 sec. at 100° F. We put in one frame of antifriction spindles using a paper bobbin of same size as above wood bobbin. These ran cooler.

On the regular pockets on the Barber-Colman spooler you must limit yourself to 10¼-in. bobbins.

Mill G: (a) The answer depends on the original spindle length. It is possible to increase from 9¼- to 10¼-in. warp bobbins if the spindle is designed for a 9¼-in. bobbin. However, on the larger bobbin, vibration is more readily evident with less spindle wear. We have had no experience with butt-welded spindle blades, nor with adapter and paper bobbins. Front roll speed: 134; 3½-in. gauge; 2¼-in. ring; 4.80 twist factor; 30 to 35 ends down per thousand spindle hours; 18s warp yarn.

(b) When the warp bobbin is closer than 1⅛ in. to the top of the B-C spooler pocket, sloughing is evident on warp wind.

Mill T: (a) We converted two Whitin long-draft spinning frames from 9¼-in. wooden bobbins to 10¼-in. bobbins without changing the spindle. On the frames with the larger package, the temperature of the bolsters increased. We doubled our oiling schedule. We have ordered Whitin spindles 4-34 with SKF bearings to test on two frames.

(b) 10¼-in. bobbin maximum.

Mill W: (a) We changed from a 2-in. ring, 8-in. bobbin to a 2¼-in. ring, 9¼-in. bobbin. We used the same spindles and bought new wooden bobbins to fit for approximately one-tenth the cost to change to an adapter.

We have 21s yarn, 135-rpm. front-roll speed, 2¼-in. rings, 35 to 50 ends down per thousand spindles per hour.

(b) 3-in. diameter package x 10¼-in. length.

Mill GG: On changing from 8-in. bobbin, 2¼-in. ring, to 9¼-in. bobbin, 2¼-in. ring, a heavier spindle was mandatory. New spindles were needed and adapters were not considered.

In changing from one size of bobbin to a different size of a like bobbin, a change on the Barber-Colman spooler would depend on the individual case. New warper spindles are needed in changing from a wooden bobbin to a paper tube.

Reducing "Wild Yarn" on Automatic Spoolers

Question: (a) What steps have you

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WORKS AT HIGH TEMPERATURES WITHOUT CLOSE CONTROL
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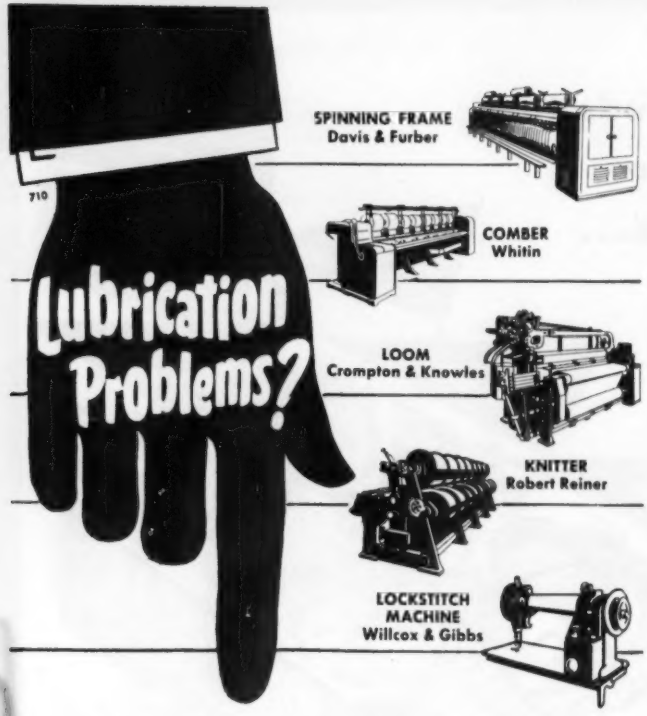

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Each maker of these machines had your best interest in mind when he built-in a Bijur lubricating system. Human carelessness and forgetfulness are eliminated by machines having built-in Bijur lubricating systems. These machines will never be shut down because they lack continous, proper lubrication. Make certain the machine you buy is furnished with a Bijur lubricating system.

Write for Bulletin 6A

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Rochelle Park • New Jersey

taken to eliminate wild yarn on Barber-Colman spoolers and warpers? (b) When using brushes on spooler drums to prevent laps, do you have more wild yarn and cotton balls than without brushes? Give yarn sizes and drum speed.

Answers: Mill A: (a) The following steps are taken to try to prevent wild yarn on Barber-Colman spoolers and warpers:

1. On spinning-mechanical: (a) Use correct build on warp-wind bobbins. (Ring diameter equals minimum taper.) (b) Correct lay of yarn. (One-half dia. of yarn between each warp).

2. On spinning-operator's reasons for tails: (a) Doffer not locking ends down on start-up. (b) Spinner pinching ends on bobbins when putting up ends. (c) Incorrect doffer's piece-ups.

3. Barber-Colman spooler—mechanical reasons for tails: (a) Dull suction-tube shears. (b) Bad rotary brushes. (c) Improper control of slack. (d) Cracked or broken slack-tube nozzles.

4. On spoolers and warpers—operator's reasons for tails: (a) Spooler operator not straightening ends on cheeses. (b) Spooler operator not picking loose yarn from around snick plates, spindle arms, and cheeses. (Any loose yarn should be picked up by the spooler operator. (c) Operator not cleaning rotary brushes. (d) Spooler operators not pinching ends from around the bottom of the bobbin. (e) Spooler operator dropping loose yarn in yarn bins and reserve holders. (f) In spite of all precautions, wild yarn will be wound into cheeses. However, the warper creelers inspects each cheese. If any loose ends should be sticking out or cross threads show on the side of the cheeses, take cheeses out, do not pinch off these ends but send cheeses to the tailing machine for rewinding. Many loose tails will never get into warper beams. (g) Warper tenders should dispose of all loose yarn collected in repairing ends down before starting the warper and then observe warper and remove any loose tails if any appear.

5. (b) We are sure there will be more yarn balls with the rotary brush. However, without the brush you will have more loose tails. The yarn balls are not so likely to catch into the running yarn as the loose tails. Our winding speeds are 1,200 yd. per min. with 0.76-yd.-circumference drum.

Mill B: (a) We are doing a more thorough job of cleaning up our spoolers and warpers while in operation during the week and on week-end clean-up.

(b) Our experience with lap-preventer brushes was that more cotton

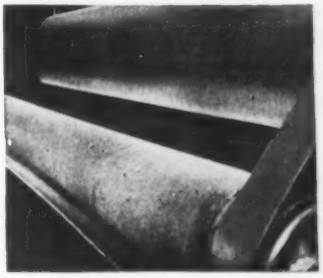
Booth

Originators of **STRIP-O-MATIC** *

CARD CLOTHING NEWS AND VIEWS

PROMINENT PHILADELPHIA MANUFACTURER CUTS STRIPPING WASTE BY 2/3

The Continental Mills, Inc., prominent Philadelphia woolen manufacturer, has reduced stripping waste by more than 2/3 on the breakers they have equipped with Strip-O-Matic* Card Clothing. Continental has been testing Strip-O-Matic for over a year on first-breaker and second-breakers. They do not, however, have a complete set equipped with Strip-O-Matic, so since stripping is required anyway, Strip-O-Matic is usually stripped right along with the other clothing. However, Mr. Charles Messa, carding superintendent, anticipates a considerable saving in down time as complete sets are clothed in Strip-O-Matic; a very considerable saving in stripping waste has already been realized which is especially important with today's high woolen prices. Continental runs a variety of wools including fleece and top, as well as synthetics. In Continental's experience it is frequently possible to skip stripping with Strip-O-Matic as often as two out of three times compared to the conventional clothing.



Note Small Amount of Trapped Stock After 48 Hours Continuous Operation: The clothing is easily cleared with a single pass of the vacuum head.

*Nylon Spinner Enjoys Runs to 9 Months with Strip-O-Matic**

The Wister Spinning Company, manufacturers of fine nylon yarns, reports that with conventional clothing they formerly had to strip every 2 to 3 weeks while working on an 8-hour shift; with 2-shift operation, the stripping was weekly or oftener. Since they have clothed complete sets including cylinders and workers with Strip-O-Matic, they have increased the time between stripping to as much as 9 months. The photograph above shows Strip-O-Matic following 9 months operation. There isn't any accumulation of stock. The carders anticipate being able to run almost indefinitely without stripping. The only down time experienced is for grinding (about every 9 months, only half as frequently as with conventional wire.) There is considerably less fibre breaking, and practically no stock loss with Strip-O-Matic.

Research and Development

is continuously improving Strip-O-Matic* for carding all types of fibre including wools, blends, and synthetics. If you have tried only the first Strip-O-Matic manufactured you owe it to yourself to try the new and greatly improved type we are offering today. A Benjamin Booth representative will be glad to discuss your specific requirements without cost or obligation.

Sincerely yours,

E. A. Sayre Jr.

* Patented ®

PRESIDENT

Booth

BENJAMIN BOOTH COMPANY, ALLEGHENY & JANNEY STS., PHILA., PA.

balls and wild yarn showed up while we were using them.

Yarn sizes and drum speeds: 1,200 rpm.: 8s, 10s, 12s, 13s yarns. 1,600 rpm.: 14s, 16s, 18s yarns.

Mill C: (a) We have attached a fan to the front of the traveler on the spooler that blows into the pockets and troughs. This device helps some. We have the tension and thread holder picked clean by the spooler tender each time the traveler makes a round.

(b) We have more wild yarn and balls where brushes are used unless the brushes are cleaned every 24 hr.

We run numbers from 10s to 25s with a drum speed of 1,580 rpm. on all numbers.

Mill D: (a) Wild yarn may be caused by: (1) sloughed yarn from bobbins; (2) shears not producing a clean cut; (3) operator failing to straighten end on starter; (4) rotary brushes not properly cleaned; (5) pieces of yarn breaking off on snick plates and picked up by winding yarn; (6) failure of operator to break tail off of the bobbin of yarn; (7) yarn rolling out of the hook shearer and hanging up on paralleling finger; (8) yarn breaking 6 to 8 in. above knot so that the bobbin end is carried to the next unit by the traveler.

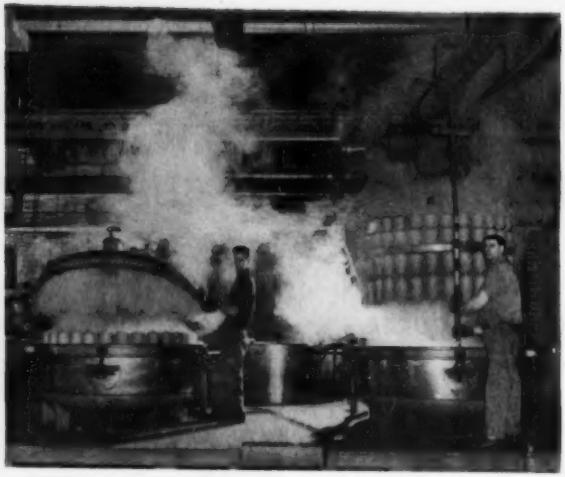
Yarn count ranges from 6s to 11.5s; drum speed is 1,350 rpm.

Mill E: (a) (1) Set snick plates properly. (2) Have sufficient air blowing from traveler into yarn pockets. (3) Break off tails close to thread clamps. (4) Spooler tender should place broken pieces of yarn in a receptacle provided for this purpose. (5) Remove burrs from cheese plough. (6) Keep good rotary brushes on traveler, and clean brushes each day. (7) Keep the thread clamps clean and in good repair. (8) Keep all shearers operating properly. (9) Use correct build on bobbins. (10) Use a stationary brush against the drum. (11) Wipe excess oil from station near rise roll. (12) Clean the machine regularly.

(b) We have less wild yarn and cotton balls on the yarn by using brushes on the drum. The yarn size that we run on the spinning is 4.5s through 20s. The drum speed varies according to yarn size from 1,040 to 1,550.

Mill G. (a) With the best possible build on the warp bobbin, correct position of the ring rail at the start-up, and good piece-ups, wild yarn is reduced. Keep snick plates correctly adjusted at all times.

(b) Cotton balls, wild yarn, etc., will not turn loose into the cheese if the brushes are in good condition



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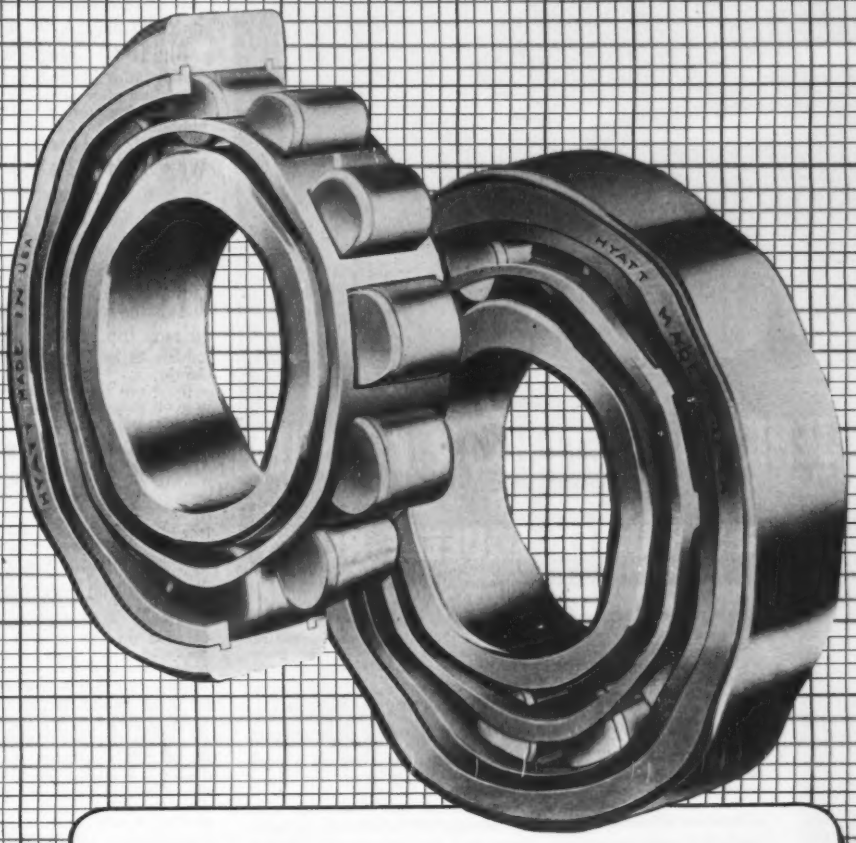

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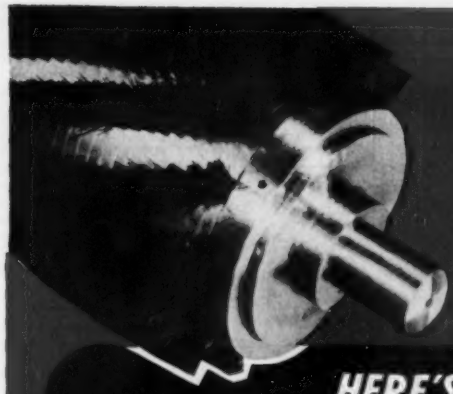
Most of the leading textile machinery manufacturers have standardized on Hyatt Roller Bearing applications or can "build in" Hyatt equipment upon specification. We will be glad to furnish any bearing information you may desire. Hyatt Bearings Division, General Motors Corporation, Harrison, New Jersey.

HYATT ROLLER BEARINGS



HERE'S WHY

JENKINS' METLKOR® BRUSHES

are on

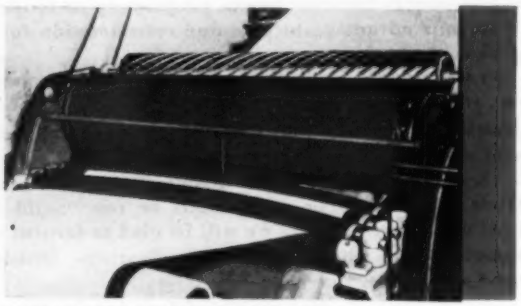
JAMES HUNTER SQUEEZE ROLLS

James Hunter Machine Co., North Adams, Mass., wanted a brush to stand up when removing acidified flock from their Carbonizer Squeeze Rolls. Jenkins' engineers designed a METLKOR brush with exposed metal parts of stainless steel and bristle of acid-resistant Nylon.

Mr. Frank B. Morrill, Chief Engineer, James Hunter Machine Co., says: *". . . we have been using Jenkins' brushes for flock removal on our Squeeze Rolls for about three years . . . They do a much better cleaning job than the brush previously used, and stand up several times longer . . ."*

This top textile machinery manufacturer has time-tested and proven the efficiency of patented Jenkins' METLKOR—the cylinder brush that lasts *many times longer* and *can be rebristled!* It can cut your brush replacement costs and do a better job, too.

If you have any standard or special brush problem, call or write: M. W. Jenkins' Sons Inc., Cedar Grove, Essex County, New Jersey.



A JAMES HUNTER CARBONIZER SQUEEZE ROLL WITH A JENKINS' METLKOR NYLON BRUSH

M. W. JENKINS' SONS, INC.

74 YEARS OF INDUSTRIAL BRUSH KNOW-HOW

Cedar Grove, Essex County, New Jersey

and cleaned often enough. We run 7s to 20s warp, 1,200 yd. per min.

Mill H: (a) Change travelers immediately after doffing a frame. This procedure eliminates the loop caused by changing from a full or half-filled bobbin.

(b) We have less laps with brushes. We run 17s to 21s with a 1,200 yd. per min. drum speed.

Mill J: (a) Properly trained spooler tenders can do more to eliminate wild yarn than anything else. They must keep tails on bobbins broken off each time they fill a pocket. All threads and loose yarn must be picked off each trip. Do not allow spooler tenders to leave long ends in thread clamp.

(b) Keep rotary brushes clean and in good shape at all times. We added an extra rotary brush in front of the knotter to clean snick plates before the knotter gets to them. This helps keep out wild yarn and keeps snick plates clean.

The warper creels must be kept clean at all times. Each time the creel is turned, it should be cleaned thoroughly with compressed air.

Mill L: (a) A suction cleaner was installed on the traveler to pick up the wild piece after the knot was made. Brushes were installed on the traveler, and they stay in contact with the drum as the traveler moves along the frame. A regular cleaning schedule of rotary brushes is maintained as well as a regular schedule for washing tubes and pipes out on the traveler. Careful instruction is given to spooler hands and warper tenders about picking off all wild yarn. The warper creel is blown off after each set prior to creeling the new set, and the new creel of yarn is blown off before it is creeled in.

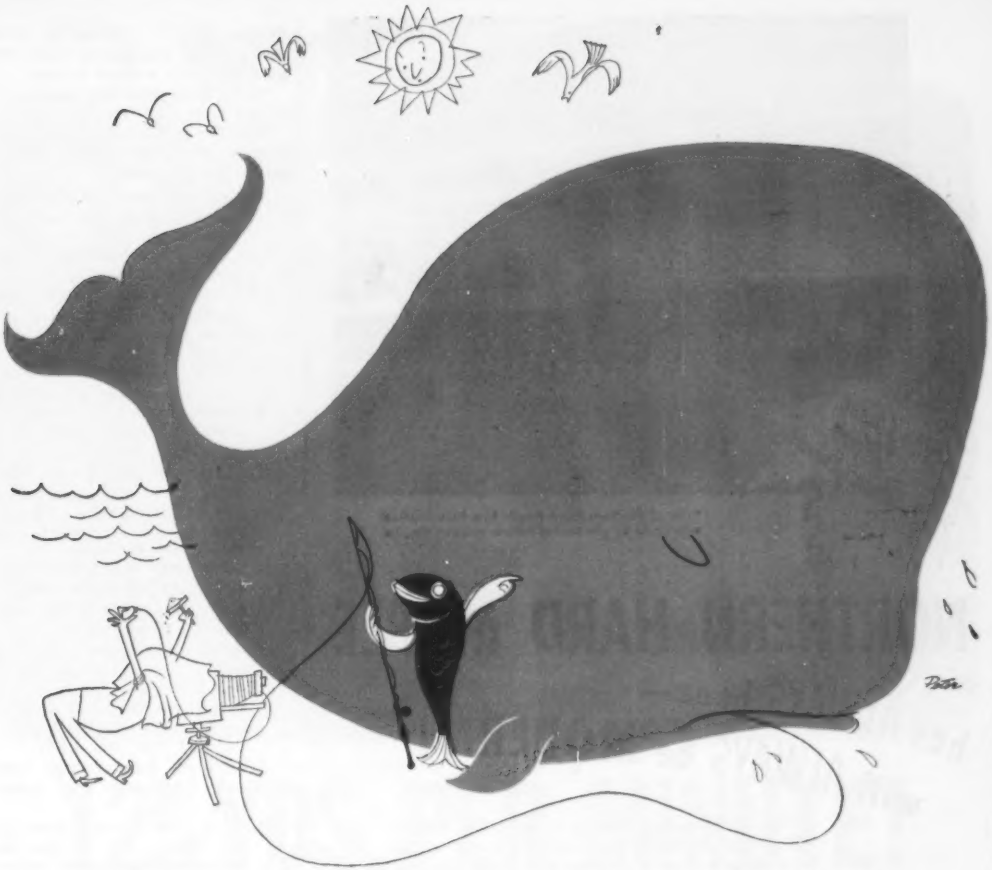
(b) We have had no experience with brushes on the spooler drum. Our drum speed is about 1,600 rpm., and the yarns tied range from 8s to 20s, both straight and reverse.

Mill N: We have equipped our thread holders with a cutting blade that the tenders use to cut the end of each creeled package. This blade reduced our wild yarn considerably. We further require the operators to clean the snick plates twice each shift, or as often as is necessary to keep them free of wild yarn, and also to keep rotary brushes and detector wires clean. Keep tails on bottom of bobbins broken off.

Mill Q: (a) Elimination of wild yarn: An effort is made to eliminate by training spooler hands properly, spinning properly built bobbins, keeping wild-yarn shear sharp, and cleaning cheese cones every 48 hr.

(b) When using brushes on spooler

For more information, write direct or use Reader Service post card.



"set a herring to catch a whale!"

English Proverbs, published in 1869 by N. C. Hazlitt

When imaginative pioneers experimented in making fishing rods with plastic and fabric woven of Fiberglas* Yarns, they baited their hooks with herring. *And what a whale they caught!* These tough, flexible rods revolutionized the industry, and Fiberglas Yarns became the leading basic material for fishing rods in a little over a year!

This is only one example of how weavers found new markets for hundreds of thousands of yards of Fiberglas fabrics—to make *new* and *better* reinforced plastic products, such as boats, appliance parts, electrical insulations and many others.

Because there is an increasing Army, Navy and Air Force demand for Fiberglas materials our customers are unable to get all the yarn they need. BUT—additional production facilities are under construction to help meet these demands. So now is the time for you to look for "herrings" with which to bait *your* hook—to land a "*whale*" of a business later on.

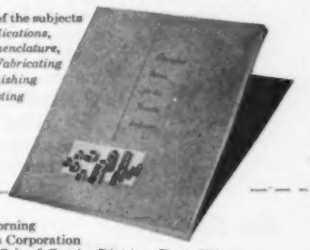
OWENS-CORNING FIBERGLAS *Yarns*

*Fiberglas is the trade-mark (Reg. U. S. Pat. Off.) of Owens-Corning Fiberglas Corporation for a variety of products made of or with fibrous glass.

To learn to "cast"—send for this informative technical manual on

"FIBERGLAS YARNS FOR THE TEXTILE INDUSTRY"

Here are some of the subjects it covers—*Applications, Properties, Nomenclature, Specifications, Fabricating Techniques, Finishing and Dyeing, Testing and Research.*



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Fiberglas Corporation
Weavers Sales & Service Division, Dept. 864
16 East 56th Street, New York 22, N. Y.
Please send.... copies of FIBERGLAS YARNS FOR THE TEXTILE INDUSTRY to:

*Name*_____ *Title*_____

*Company*_____

*Address*_____

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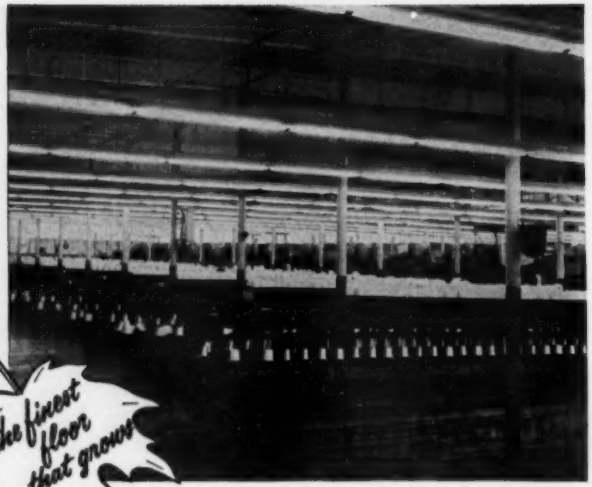

Floor of Northern Hard Maple in a New England mill. Photo by courtesy of Abbott Machine Co., Inc.

NORTHERN HARD MAPLE

has ALWAYS been-- will ALWAYS be MODERN!

Your mill floors of cheerful, long-lasting, *resilient* Northern Hard Maple afford the ideal setting for today's ultra-modern machine equipment. For the special needs of textile manufacture were the reasons that led you unerringly to choose "the finest floor that grows" when you planned your mill. Maple meets those needs today as always. Better than ever, in fact, for rigid **MFMA** grading and manufacturing standards assure you of Northern Hard Maple flooring true to dimension, to species and to character. Specify **MFMA** Northern Hard Maple. Its genial *resilience* means comfort underfoot and utmost resistance to dents and scars. Its dense texture and stability minimize crevices for dirt to lodge in. Easy brush cleaning, simple maintenance routine, are all it needs. In strips, blocks, patterned designs. Ask your architect or engineer.

See Sweet's
Arch. 13i/MA
for specification data.

MAPLE FLOORING MANUFACTURERS ASSOCIATION
Suite 592, Pure Oil Bldg., 35 East Wacker Drive
CHICAGO 1, ILLINOIS

FLOOR WITH NORTHERN HARD MAPLE BEECH AND BIRCH

drums, there is considerably more wild yarn and considerably more "cotton balls" than without brushes.

Drum speeds and yarn sizes: 1,250 yd. per min., 22s yarn.

Mill S: (a) To help prevent wild yarn on our Barber-Colman spoolers, we do the following:

1. Keep machines clean by blowing off spoolers once each shift with bobbins boxes empty.
2. Check knotter settings at least once each week.
3. Keep thread clamps well cleaned and adjusted.
4. Keep good blades in thread clamps.
5. Check pressure-lever springs each time traveler is blown off.
6. Check cheese-arm ploughs for worn and rough places once each shift.
7. Check for scarred and worn roller.
8. Check for scarred or clogged slack tube, and clean two or three times per week.
9. Clean rotary brush every 4 hr., and replace bad or worn brushes.
10. Keep cheese cores in line, with bearings turning freely.
11. Keep cheese core arms in line so that end will not get off on side of cheese.
12. When replacing full cheeses, see that pieces are not tangled and that ends hang freely.
13. Break off doffer tailings from each bobbin of yarn before being spooled.
14. When an end breaks down before running out, see that the bobbin containing that end is lifted out by hand to prevent a doubling or perhaps the tangling of several ends. (The rotary brush picks up the end if left in the pocket.)
15. Blow off section of spooler where wild yarn has collected because of the running of a lap before the traveler has gotten to any part of this section.
16. Keep snick plates adjusted properly.
17. Check and maintain a good air pressure on spoolers at all times.
18. Clean spoolers once each 24 hr. with pneumatic roll picker.

To help prevent wild yarn on our Barber-Colman warpers, we do the following:

1. Blow off creels after each creel runs out.
2. Have air suction over warper head and under creel for removing fly, trash and wild yarn.
3. Piece up end when wild yarn collects on expansion comb.

(*Continued on page 214*)

125 YDS. PER MINUTE!

-with the *NEW* Hunter open-width Compartment washer

That's right . . . United States Finishing Company is soaping and rinsing 2-yard-per-pound cotton print at *125 yards per minute!* Production either equal to this — or greater production than you are now getting on your own goods — is assured by using the New Hunter Compartment Washer. Whether your requirements call for soaping, oxidizing, desizing or washing — you can do it better and faster with the New Hunter!

Here's why. This equipment was developed by practical mill men who must rely on new, modern equipment for *production at a profit!* Each tank includes stainless steel bottom and rubber covered top nip rolls with stainless steel idler rolls at the top and specially constructed reels in the bottom to help the scouring action and loosen the gum. All rolls are mounted on separate frames, and any part can be removed without the disassembly of other parts. Full details are yours for the asking.

Write for free Catalog . . .

Call in a HUNTER Field Engineer...

D. L. Raedel, 1936 West Lake Street, Chicago, Ill.
S. Alex Dalghren, Ivyland, Bucks County, Pa.
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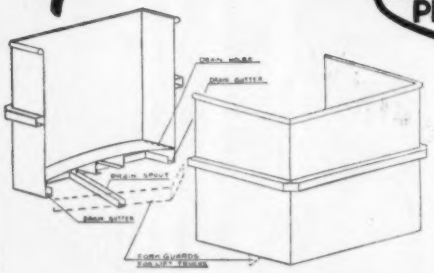
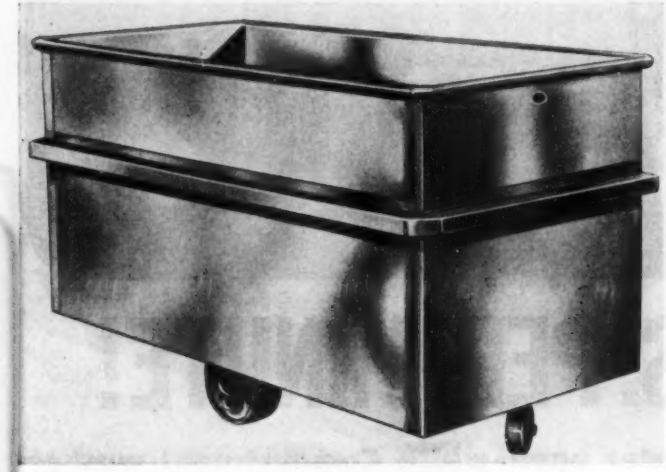
GLASCO
METAL INDUSTRIAL EQUIPMENT
PRODUCTS



Curved bottom drains liquids to sides.

Gutters at sides lead liquids to drainage ducts at either end and discharge toward bottom center of the truck.



NEW

Stainless Steel—
CONTROLLED DRAINAGE
DYE HOUSE TRUCK

This new Glasco Dye House Truck drains continuously towards center of truck—eliminates dripping of water on handler's feet—improves health conditions—permits goods to be *laid* in truck instead of being tossed in at arm's length. With addition of simple guards, drain truck can be rapidly transported by fork lift trucks.

Specifications: Truck available for light, medium, and heavy duty—in 1,000—2,000—and 3,000 lb. capacities. Sizes available in 34" or 46" widths—with depth of 32"—and lengths of either 60" or 70". Special Sizes on request. *Send for full facts.*

●

Manufacturers of modern metal equipment for wet processing uses, including Dye Jig Enclosures, Dye Tubs and Becks, Wash Tubs, etc. of stainless steel and other metals that resist corrosion under most alkali and acid conditions.

GLASCO EQUIPMENT CORPORATION

Pioneer Fabricators of Stainless Steel Equipment

10 WAIT STREET **PATERSON, N. J.**

Representatives:

Massachusetts
Charles L. Niles Company, Boston

North Carolina
Odell Mill Supply, Greensboro

South Carolina
Greenville Textile Supply Co., Greenville

4. Clean chain and sprocket gears in creel weekly.
5. Put waste in waste box after piecing up ends.
6. Caution operators not to lean on beams. (Prevents wild yarn transferring to beam from operator's clothing).
7. Have air pipe automatically blow out each bucket as creel is changed.

(b) No experience.

Mill T: (a) To reduce wild yarn on Barber-Colman spoolers, we check and clean rotary brushes every 2 hr., or oftener if needed. Spoolers are blown-off every 4 hr.

The blowers on the traveler have been changed to blow into the trough and into the pockets to keep loose lint and yarn from collecting.

Spinning-frame doffers, when starting up frame after doffing, are required to lower rail and run ring around bobbin to tie the tail down.

To reduce wild yarn on warpers, we built partitions half-way down from the ceiling to separate the individual warpers. Curtains are hung from the partition to the floor and are closed after each creel while the warper is blown off.

In front of each warper we have installed a 16-in. fan that blows down into the comb and creel and blows loose lint and wild yarn down and out of the warp.

(b) No experience.

Yarn sizes: 12s, 14s, 14.5s, 16s, 19s, 22s. Drum speed: 1,604 rpm. 1,225 yd. per min.

Mill W: (a) We check our settings daily to eliminate all wild yarn possible due to mechanical faults. We also have spoolers picked daily with a pneumatic roll picker, and have operators pick all possible when they can get to it.

(b) We use brushes on our drums and have found that they do cause more ends of yarns from cheese to break, but we have not found any lint balls caused by these brushes.

We clean these brushes every 8 hr. with a small wire brush that helps a lot to keep wild yarn from getting on yarn.

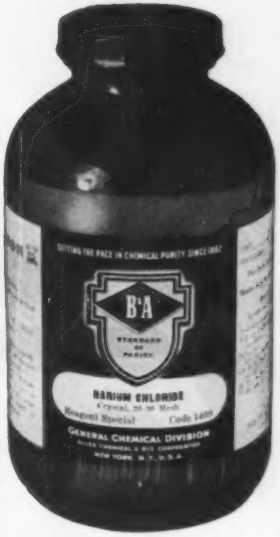
Yarn Nos. 19½s to 30s. Drum speed is 1,750 rpm.

Mill X: (a)

1. Set snick plates properly.
2. Break off tails close to thread clamps.
3. Keep sufficient air blowing from traveler into yarn pockets.
4. Train spooler tenders to place broken pieces of yarn in receptacles.
5. Keep cheese plough clear of burrs.

(Continued on page 216)

3 reasons why you should specify B&A reagents!



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B&A has over 1,000 laboratory chemicals for you to choose from.

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always meet or exceed A.C.S. specifications.

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from B&A's own well-stocked distributing stations situated in key centers everywhere.

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THE BAKER & ADAMSON LABEL *is your assurance of the highest purity.* Reagent chemicals that bear the B&A "Shield of Quality" *always meet or exceed A.C.S. specifications* . . . the exacting purity standards set by the chemical profession itself!

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DARNELL CASTERS
& E-Z ROLL WHEELS

A SAVING AT EVERY TURN

A SAVING AT EVERY TURN

If you want maximum floor protection, economy and efficiency Demand Darnell Dependability...Made to give an extra long life of satisfactory service . . . . .

DARNELL CORP. LTD. 60 WALKER ST. NEW YORK 13 N.Y.
LONG BEACH 4 CALIFORNIA 36 N. CLINTON CHICAGO 6 ILL.

6. Wipe excess oil from stations near rise rolls.
7. Keep good rotary brushes on traveler, and clean brushes once each hour.
8. Stop spinning frames with ring rail at center of package for doffing.
9. Keep thread clamps clean and in good repair.
10. Keep all shearers operating properly.
11. Use correct builds on bobbins.
12. Reduce drum speeds if they are excessive.
13. Check rise-roll and pressure-lever adjustments.
14. Adjust vacuum by regulating relief valve.
15. Clean the machines regularly.
16. Use bat-wiring thread guides.

(b) With the brushes we did have a great deal of wild yarn and cotton balls. We changed from brushes to the felt lap preventers and turn these up and clean them each 4 hr. This method has practically eliminated our trouble. Our warp yarns are 13s, 20s, 26s, and drum speeds are 1,450 rpm.

Mill CC: (a) To reduce wild yarn on our Barber-Colman spoolers, we keep our knotters cleaned and in good repair.

We also keep our snick plates, vacuum system, and suction tubes checked and cleaned. We blow off all spoolers and travelers every 4 hr. and pay special attention to drum and rotary brushes.

We train our spoolers to pick up any loose ends of yarn from the troughs, snick plates, or anywhere they are found, and, together with the pieces broken while putting up ends, wrap them around their right fingers and put them in the waste box.

We also require our doffers to tie their ends down on spinning when starting up a doffed frame.

(b) We have installed drum brushes on our spoolers and have practically eliminated drum laps. We think we have made a definite improvement in the amount of wild yarn and cotton balls at the spooler.

Our drum speed is 1,212 yd. per min. on yarns from 14s to 32s.

Mill EE: (a) (1) We have installed brushes on spooler drum. (2) We installed fans on travelling unit to keep bobbin pocket clean. (3) We require operator to pull tail off end of bobbins left by doffers when starting up frame. (4) We installed push-button knock-offs on warpers a few feet in front of warper on table to allow operators to stand in front of warper and watch for wild yarn so they can stop warper without having

with a Kidde Dry Chemical Extinguisher!

Kidde Dry Chemical Extinguishers can be used in normal standing position. Just pick up, point the horn, pull the trigger.
Streamlined diffuser horn gives better discharge pattern which provides greater space coverage and more protection for the operator.

SUPPOSE you had to fight a fire . . . wouldn't you prefer the kind of extinguisher which effectively covered 44% more space . . . and at the same time protected you from the heat?

You get exactly that kind of protection from a Kidde Dry Chemical Extinguisher. Factory Mutual Laboratories requires a 20 pound dry chemical extinguisher, in the hands of an experienced operator to effectively cover 25 square feet of burning area. But a Kidde 20 pound unit covered *36 square feet*—44% more! And the Kidde 30 pound unit covered 48 square feet as compared to the 35 square feet required by the test.

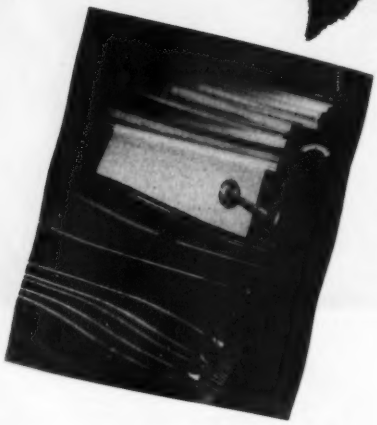
The Kidde Diffuser Horn distributes the dry chemical in a cloud-like pattern which helps eliminate splashing in burning liquids as it smothers the fire. The dry chemical absorbs most of the heat, thus protecting the operator.

Why not let the Kidde "44% margin of safety" help protect your business against fire?

Kidde

Walter Kidde & Company, Inc., 691 Main Street, Belleville 9, N. J.
Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.

Now you can be certain of **correct** warp moisture in sizing any type of fibre.



FIELDEN Electronic Warp Moisture Control automatically controls the exact moisture content of warps at all times enabling you to . . .

1. *PREVENT OVER DRYING OF WARPS* which causes excessive breaking of ends and lowered loom efficiency.
2. *PREVENT UNDER DRYING OF WARPS* which may cause the warps to mildew or otherwise be unusable.
3. Get up to 15% greater speed in sizing.

Mills that have used other types of moisture controls tell us that *FIELDEN ELECTRONIC WARP MOISTURE CONTROL* is the only instrument that has given them accurate and consistent results on acetate and nylon yarns.

Successfully used on Cocker, Hibbert, Johnson, Saco Lowell, and Uxbridge slashers in many hundreds of installations both here and abroad.

Fielden **INSTRUMENT CORPORATION**

Canadian Agent: **ELECTRODESIGN**
145 Normand St., Montreal

2920 NORTH 4TH STREET
PHILADELPHIA 33, PA.

to take two or three steps.

(b) We have less wild yarn and cotton balls since brushes have been installed. Yarn size 4.5s to 22s. Drum speed 1,450 on counts 7s and finer —below 7s, 1,200.

Mill FF: (a) (1) We removed lap preventers, as brushes are now on drums. (2) Keep sloughing from spinning to minimum. (3) Have spooler tenders keep all loose yarn picked off spooler and out of snick plates.

(b) Not noticed. Speeds: 1,200 yd. per min. on 11s to 34s yarn.

Mill GG: (a) Reworked cleaning schedule, smoothed rough edges in path of yarn.

(b) Brushes are under consideration.

Yarn 8s, 10s, 14s, 28s: 900 yd. per min.

Mill HH: (a)

1. Keep knotter in good condition, blades sharp to prevent ends dragging.
2. Clean brush periodically.
3. Blow off and blow up around warpers after each creel.

(b) We have fewer laps and more lint balls. The lint balls are removed from the spooler by blowing off once each 8 hr.

Yarn sizes range from 7.5s to 29s. Drum-speed range is from 1,545 through 1,738.

Mill II: (a) One factor in reducing wild yarn is having the proper build on all bobbins when they are produced on the spinning frame. Special measures have been taken to keep the builder motion in good condition at all times. Other steps taken include installation of drum brushes, constant checking to keep rotary brushes clean and in good condition, having operators break off the tail at the butt of the bobbin, and having the doffers tie down the tail by holding the rail at the bottom of the traverse when starting up the frame.

(b) We have less wild yarn when using brushes.

Yarn counts are 30s, 32s, and 40s. Drum speed is 1,560 rpm. or 1,200 yd. per min.

Pneumatic Roll Pickers

Question: What has been your experience with pneumatic roll pickers? How many frames do you have per air outlet? What is the longest air hose you have found practical?

Answers: Of 34 mills reporting, 33 reported very satisfactory experience with pneumatic roll pickers. One mill reported unsatisfactory experience.

The answers on length of hose used and frames services per outlet are summarized in the accompanying table. Several mills felt that 100 ft.

Tricot at its best!

Among the quality tricot mills, the name of Blue Ridge Textile Co., Inc. is a prominent one. Its record for quality, creativeness and versatility is known throughout the trade. Its fabric creations are tricot at its best.

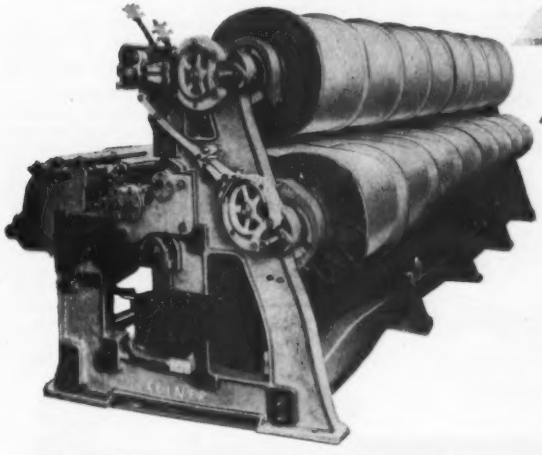
The management of the Blue Ridge Textile Co., Inc. are careful planners. They know that top quality and versatility require equipment that guarantees them exactly that—and more. They rely largely on Reiner Tricot Machines, Warpers and Creels for the fine fabrics they need and want to satisfy discriminating customers who have become aware of the beauty, wearability and other practical features of tricot—the fabric with a big future.

To those striving for top quality—the answer is simple: Reiner warp knit machines—Tricot, Simplex, Raschel—plus Reiner Warpers and Creels. They have earned their mill reputation as profit building teams for all around excellence.

Quality Fabrics depend on Quality Machines. For that reason the trade's very best mills use Reiners.

Photos Courtesy William Winkler, Inc.

Mills: Blue Ridge Textile Co., Inc.



Available: 2 and 3 bar machines, with 2 bar machines convertible to 3 bar use and vice-versa—long needles for coarse gauge fabrics—knitting widths 168" and 84"—all gauges—automatic oil feed lines throughout—pattern wheel or chain link drive—positive cloth take-up—and other features.

Write for our fully illustrated catalogs.

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INCORPORATED

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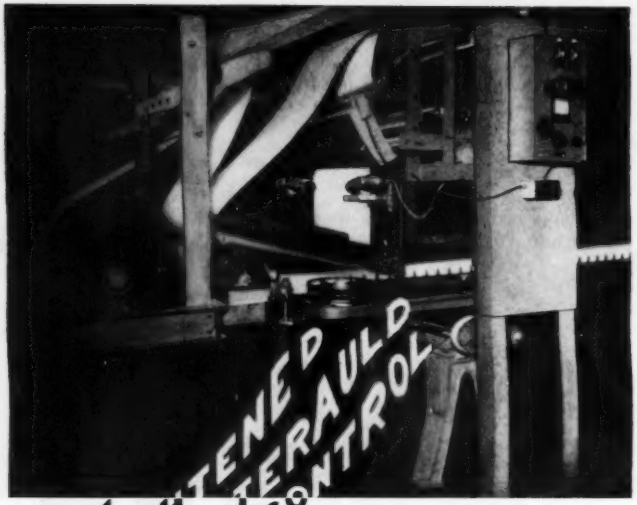


Paramount Printing & Finishing Co., Pawtucket, R. I., in their high speed production methods, insist on straight goods before printing.

Pictured above is one of Paramount's ranges which are complete with W & J "reflected light type" weft straightener package units and tenters with W & J No. 5 clips.

Through continuous development the latest model straightener, J-3, provides unmatched simplicity of control and consistency in operation.

The W & J straightener is adaptable to any existing range handling woven or knitted goods in open width.

For those mills, increasing speeds for greater yardage while emphasizing improvement in quality, the W & J straightener is a must.

(Ref. to W & J Bulletin WS-100)

Winsor & Jerauld
MANUFACTURING COMPANY INC.
1268 EDDY STREET, PROVIDENCE, R. I., U. S. A.
Builders of Fine Cloth Finishing Equipment since 1900

Summary of Practices Of Mills That Use Pneumatic Roll Pickers

Length of Hose Used

Length	No. of Mills
1 frame length	1
1 frame length plus alley width	1
Long enough for 2½ frames	1
Long enough for 84 frames	1
50 ft.	6
60 ft.	1
75 ft.	8
100 ft.	12
131 ft.	1
140 ft.	1

Frames Serviced per Outlet

No. of Frames	No. of Mills
2	2
4	4
6	2
7	1
8	5
9	1
10	3
12	6
13	1
16	2
20	1
30	1
34	1
48	1
84	1

of air hose is the longest practical length. Two mills reported using ¼-in. hose instead of ½-in. hose.

Several mills stressed the importance of keeping pickers oiled or greased according to directions. Failure to do so will cause high maintenance cost.

One mill reported that it provides a small trough for storage of the picker. The trough is made with a piece of angle iron attached to the bottom of the spindle rail for the hose to rest in when not in use. One mill stressed that lack of proper instruction in use of the roll picker could cause a great deal of bad work, damaged rolls and aprons, and accidents.

Answers to Textile Quiz on Page 168

1. c. [TW, April, '51, p. 4]
2. a. [TW, April, '51, p. 89]
3. d. [TW, April, '51, p. 92]
4. b. [TW, April, '51, p. 94]
5. b. [TW, April, '51, p. 96]
6. d. [TW, April, '51, p. 99]
7. c. [TW, April, '51, p. 100]
8. d. [TW, April, '51, p. 104]
9. a. [TW, April, '51, p. 106]
10. c. [TW, April, '51, p. 108]

nylonized TRADE-MARK

is a trade·mark

It identifies the miracle finish for hosiery, girdles, bras, slips, and blouses. Originated by Hans C. Bick, Inc., it is the property of this company. The "Nylonized" garments of important manufacturers boast a brand-new absorbency. This means added all-weather comfort and softness—spectacular sales appeal. Nylon's usual fast-drying characteristics remain unaltered.

Permission to use the "Nylonized" trade-mark is granted to all manufacturers whose products are treated with this special "Nylonized" finish, and to all retailers selling such products.

† the bonding of type 8 nylon to nylon fabrics

When you use the word "Nylonized"* it should be identified as a trade-mark!

* TRADE-MARK

nylonized TRADE-MARK

a revolutionary new finish originated by

Hans C. Bick INC
READING, PENNSYLVANIA

Advertised in
VOGUE and THE NEW YORK TIMES

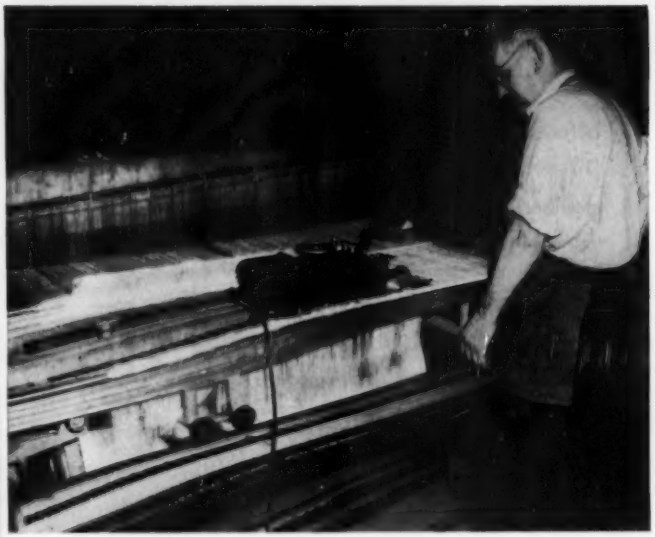
Hans C. Bick, Inc. permits use of its trade-mark "Nylonized" only on fabrics which have been treated by procedures approved by this company

IT'S NEW

IT'S SPEEDY

IT'S ECONOMICAL

TITAN *automatic warp tying machine*



Here are some typical results in representative American mills:

Acetate warp 9055 ends, preparation 22 minutes, tying-in 24.5 minutes, total time 46.5 minutes.

Rayon warp 7050 ends, preparation 20 minutes, tying-in 19 minutes, total time 39 minutes.

Actual production for eight hours, using one tying stand only:

Acetate or viscose (75-120 den.) 10 to 12 warps of 4500 ends.

Cotton 20/1s 12 warps, 3000 to 4000 ends.

Worsted 24/2s 10 warps, 2000 to 3000 ends.

Woolen 8s 8 warps, 2000 to 3000 ends.

Can your production match these? If not, write for free illustrated literature.

EDDA INTERNATIONAL CORP.

468 FOURTH AVE NEW YORK 16, N. Y.

U. S. General Sales Agents

Fiber Blending

(*Continued from page 141*)

Not only does this saving reflect in the cost per pound or yard, but also in the quality of the product. In fact, quality must be the foremost consideration, for without it no amount of production can be worthwhile.

We can also consolidate picking into a one-process, two-beater job. Advantages to this method include obtaining a good-blended lap without the need for double handling.

Reworkable waste is also better controlled by a procedure of weighing it out in the desired percentage as a separate component of the blend. After all, it is just that. Uneven distribution of waste in the mix, or too much waste, causes as much trouble as misproportionment of the other components.

2 A cotton mill runs a 50-25-25 blend of cotton, grades 1 and 2 comber noils, respectively. Present production is approximately 32,000 lb. per 40-hr shift, with two two-process pickers. The top half of the diagrammatic layout on page 141 gives the general process and flow procedure.

The mill can increase its production to 80,000 lb. per 40-hr. shift on the same blend of stock if it puts in an automatic blending system. The bottom half of the sketch shows how.

The 40% increase in production is accomplished within the same floor space in opening and with one less employee, giving 48,000 more pounds per shift per week with a decreased direct-labor cost.

Since only one blend is processed, the blending line feeds all four pickers by means of the automatic distributor. With improved blending accompanying the reduction in labor and the higher production, the general efficiency of spinning and weaving should also improve because of the fewer ends down and filling breaks that result from uniform yarn.

It may well be possible for this plant to incorporate a 5% low-grade tinge or waste component in the mix and still achieve uniformity of blend and maintain comparable quality because of the accuracy of the blend. Thus, on a three-shift basis with a total of approximately 25,000 bales of stock used yearly, 5% (or 1,250 bales) of the low-grade component will have been used. At 2¢ per lb. saved on even this quantity, a raw-material saving of $12,500 could be effected per year.

3 A woolen mill makes three purchases of several lots of wool of different origin, totaling 80,000 lb.

...BEST RESULTS YET!

with our NEW HINNEKENS TENTERING FRAME

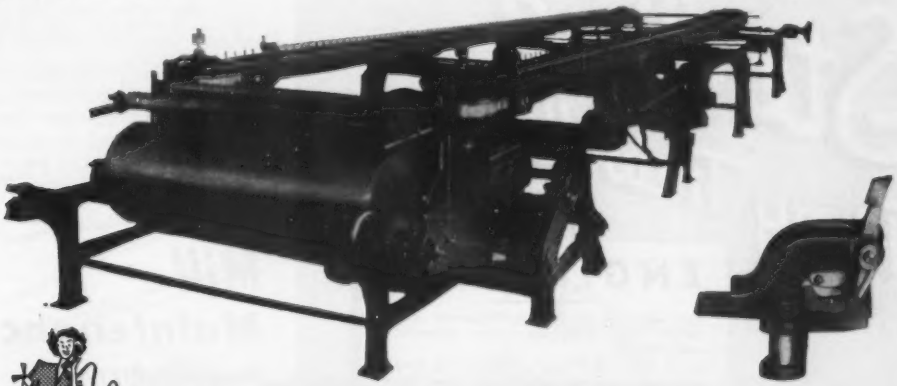
There's no doubt about it, textile finishers are all talking about the new Hinnekens speedy Tentering Frames. "Best results yet" . . . "Economy of operation" . . . "High uniform quality"—are just some of the praises given to this modern machine. Compare below the quality packed features of this machine, and you will be convinced that your next Tenter Frame will be "HINNEKENS".

CUSTOM BUILT, The Hinnekens Heavy Duty Tentering Frames are made in lengths from 20 to 120 feet with widths from 30 to 120 inches, standard equipment includes:

- Motor driven power opener
- Automatic chain tightening device
- Lubricators for rails (drip type)
- Telescope type covers on all opening and closing screws
- Large indicator to regulate width of fabric being framed
- Patented Clips—Bronze tops with stainless steel plates and controllers. Clips will handle any thickness of materials at present day high speeds
- Furnished with Reeves Drive—AC/DC or Fluid as required.

HEAVY DUTY drive heads—use Hinnekens own enclosed reduction unit with heat treated bevel and spiral gears mounted on Timken tapered roller bearings. The entire unit is totally enclosed, and runs in an oil bath. This Drive provides for lengthening of frame to 120 feet if required without changing the driving heads.

Contact any of the representatives listed below—They will be glad to discuss your particular use of Tentering frames, or show you other Hinnekens Dyeing, Bleaching and Finishing machinery.



The HINNEKENS machine co. inc.

199 GODWIN AVENUE, PATERSON, N. J.

NEW ENGLAND REPRESENTATIVE	Peter Jaswell & Son 37 Brentwood Ave. Providence 8, R. I.
SOUTHERN REPRESENTATIVE	T. E. Lucas Assoc. Inc. P. O. Box 1696 Charlotte 1, N. Carolina
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KEOKUK, IOWA · · EST. 1881

for one week's operation. This total consists of the following:

40% fine wool 64s grade		32,000 lb
Three lots—	10,000 lb. So. Amer. Lambs	
	12,000 lb. So. African	
	10,000 lb. Aus. Short	
	32,000 lb.	
40% noils of Bradford combed		32,000 lb.
Five lots —	8,000 lb.	
	10,000 lb.	
	5,000 lb.	
	4,000 lb.	
	5,000 lb.	
	32,000 lb.	
20% waste		16,000 lb.
5% own waste—4,000 lb.		
10% worsted-card waste—8,000 lb.		
5% garnetted waste thread—4,000 lb.		
100%		80,000 lb.

The proposed procedure here is to preblend each of the three lots by using one line of six automatic feeders. By preblending the lots, uniformity is certainly assured by the law of mathematical probability, since small cross sections of each bale in each lot are blended first and then cross-blended in the whole.

According to present methods in the mill, stock from each of the purchases or lots is used. It is, of course, impossible to obtain a blend by ordinary methods that would be uniform from beginning to end, even though accurate weighing and thorough mixing were accomplished.

By the new method of baling the blended stock instead of storing it, the undesirable situation of large storage bins is eliminated. Other undesirable aspects eliminated include fiber separation, floor space used, labor to remove stock from bins, and, of course, the ever-present and dangerous loose-fiber fire hazard.

Finally, bales of well-blended stock can be easily handled and stockpiled for immediate or later use. The mill can prepare its blend for the coming week or weeks. And it can predict running characteristics and quality of that blend in actual operation.

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Our experienced Service Engineers can assist you in improving your Spinning and Twisting.

Show them what you are doing and they will help you to achieve the goal for which you are aiming.

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J. S. Furtado	Box 803	Fall River, Mass.

STERLING RING TRAVELER CO.
FALL RIVER, MASS.

Mill Maintenance

Insulation Prevents Corrosion of Equipment

Condensation of moisture from hot gases often causes corrosion of heated equipment in high-humidity mills. According to The Magnesia Insulation Manufacturers Assn., proper insulation of the heated equipment will help avoid this corrosion.

Here's an installation at a steam plant that will show you how the insulation is applied.

To prevent air pollution by smoke

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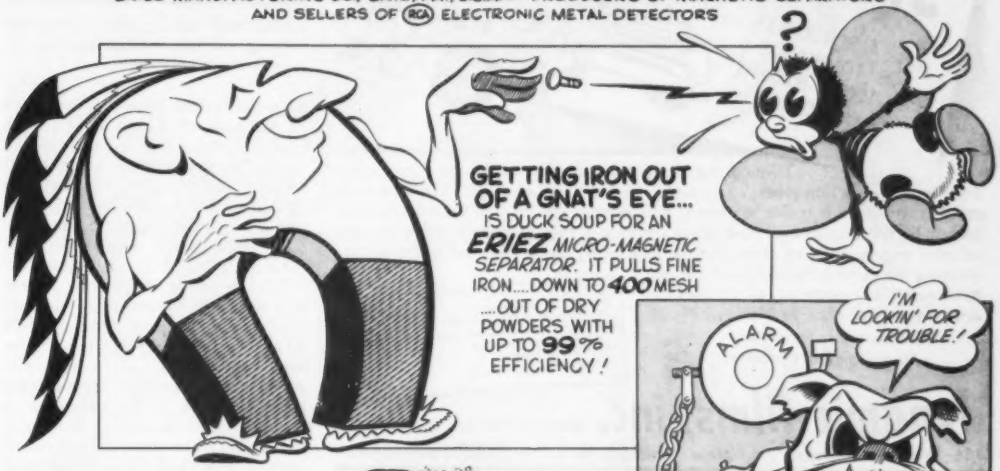

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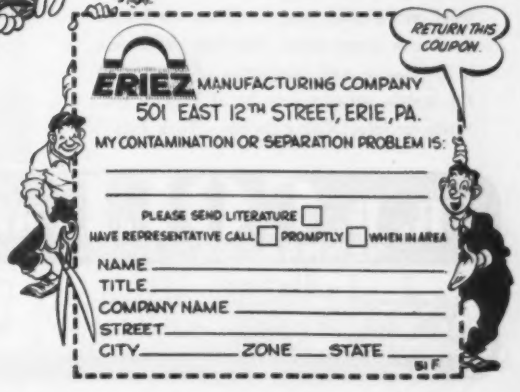
RECOVERY OF EXPENSIVE TOOLS WITH AN ***ERIEZ*** **ATOM**AGNET PULLEY PAID FOR THE UNIT IN A YEAR. THE PULLEY AUTOMATICALLY CLEANS IRON AND STEEL FROM MATERIALS BEING CONVEYED ON BELTS.

AN ***ERIEZ*** PLATE-TYPE **ATOM**AGNET HAS MAGNETICALLY LIFTED A CIGARETTE WEIGHING **447** TIMES MORE THAN THE FERROUS PARTICLE HIDDEN IN IT! ....RESULTS ARE JUST AS STARTLING WITH OTHER PRODUCTS.



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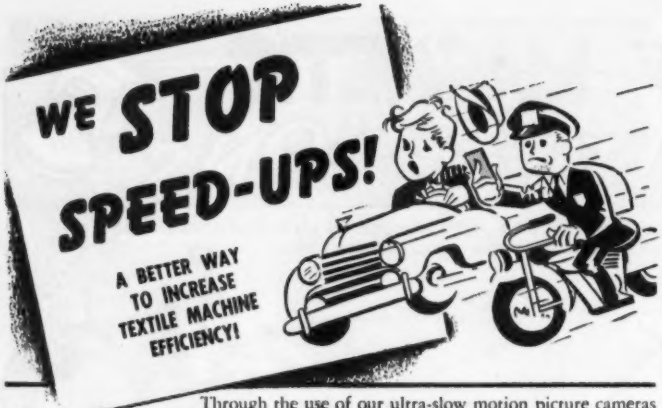

Through the use of our ultra-slow motion picture cameras (one second of action takes 5 minutes to project), we virtually STOP the high speed action of your textile machines. This permits you to find defects normally unseen by the human eye. And when machinery fails to operate properly, this valuable engineering tool offers you the most rapid and economical means of discovering the cause of breakdowns. *An experienced representative will be glad to discuss your individual problems with you.*

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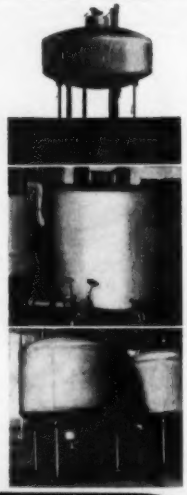
Kettles..Kiers..Vats—for TEXTILE LIQUIDS



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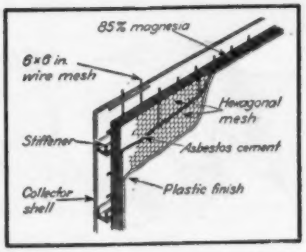


INSULATION, such as shown on this dust collector, will help avoid condensation corrosion on heated equipment.

from the boilers, giant dust collectors on the roof of the plant clean the smoke before it goes out through the stacks. The temperature of the metal collector shells must be kept between 280 and 300° F., since condensation and the resulting corrosion would increase maintenance requirements and reduce the life of the collectors.

This degree of temperature control was obtained by insulating the collectors with a layer of 1½-in. thick 85% Magnesia blocks. The insulation was applied over 6x6-in. wire mesh, which was welded to the exposed angle stiffeners of the collectors. A layer of 1½-in. hexagonal wire mesh was applied; and then it was covered with a ½-in.-thick layer of asbestos cement.

Because the installation is outdoors, the insulation was given a weather-resistant finish. A layer of 1-in. hexagonal wire mesh was stretched over the asbestos cement, and weather-resistant asphaltic asbestos plastic was troweled on.

Maintain Light Equipment At Its Initial Efficiency

In his talk at the Plant Maintenance Conference held in Cleveland this year, G. S. Ketter, Engineering Div., The B. F. Goodrich Co., Akron, Ohio, outlined the main things that can be done to maintain lighting equipment. Here are a few of his suggestions.

1. Keep lamps replaced

The output of all light sources diminishes with use; and in many cases, it is economical to replace lamps before they finally fail. With planned lamp-replacement schedules, savings may be realized by replacing groups of lamps rather than individual ones. In certain specific applications where color matching of fluorescent tubes is important, group lamp replacement offers the only solution.

2. Keep lamps and fixtures clean

Lamps and fixtures collect dust and

MAKE FINER, TIGHTER *Lace edgings*

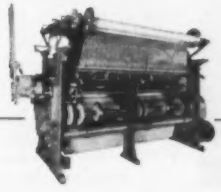
Cut production costs, too. With the *Kidde* Knitter five or six guide bars can be used to produce edgings of a quality much in demand today. Even on six guide bar work, production speeds of *160 courses per minute* or better are being maintained.

That rate of production is *substantially higher* than has ever been reached on this type of machine before—but it's *typical* of the high, *sustained* speeds attainable with the *Kidde* Knitter. Thanks to a new drum drive, a new motion on needle bars these speeds are possible—and the entire machine is designed to withstand them.

See for yourself how the *Kidde* Knitter is adaptable to practically any type of yarn, thread or elastic—how it is set up for simple or intricate patterns quickly and easily. We will be pleased to show you a machine in operation at our plant.

Use the Kidde Knitter to make these fabrics, too

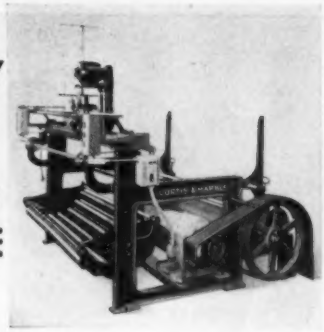
Elastic Fabrics for corsets, girdles, brassieres. Dress Fabrics. Dish Cloth Materials. Curtains. Narrow Fabrics: edgings, braidings, laces. Shoe Cloth. Knitted Outerwear Fabrics for sweaters, polo shirts. Nets and veilings.



KIDDE MANUFACTURING CO., INC., BLOOMFIELD, N. J.

No. 55
RAILWAY
SEWING
and
ROLLING
MACHINE

Motor Driven Completely



The cloth from the loom bolt is placed in the cradle in front, and the ends are stitched together as fast as the goods are unrolled from the loom bolt, and as many pieces as desired are rolled up in a large roll ready for the next machine.

This newer model has several improvements over the older style No. 25 and No. 55 machines. The rolling-up rolls run in ball bearings, and are connected by roller chain. The front roll is driven from a brake motor by V belts.

Write for our new, fully illustrated catalog of Cotton Machinery No. 7-51.

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Rolling equipment that doesn't roll easily reduces efficiency and profits in your mill. There are 1458 standard Colson casters—many designed especially for Textile mills. They roll easily over all floors, swivel freely, are rust-resistant. Many models have thread guards. Colson also manufactures a wide range of trucks for the Textile Industry—hand trucks, platform trucks, box trucks, drum and barrel trucks and special devices. Write us or consult your phone book for the local Colson office.

Model 3-427-16 with thread guards, designed especially for the Textile Industry.

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dirt, which reduce lighting efficiency. The rate of depreciation is dependent upon the atmospheric conditions and the type of lighting system employed. A thorough cleaning of lighting equipment at least twice a year is usually justified economically in favorable locations. Under adverse conditions, three or four cleanings are needed to achieve the lowest cost of operation in terms of foot-candle hours per dollar. With proper cleaning schedules, an increase of at least 25% is often realized in the average maintained value of illumination.

3. Keep surrounding reflecting surfaces clean

The necessity for cleaning or painting room surfaces depends on the amount of dirt contained in the atmosphere and the type of lighting system employed. Lighting losses can be kept at a minimum and improvements in brightness ratios can be obtained by the proper selection of light-colored finishes on ceilings, walls, machinery, furniture, and flooring.

4. Keep lighting equipment in good condition

Maintain auxiliary equipment, fixture parts, and electrical circuits. Overloading of circuits causes a voltage drop, which results in decreased light output. Over-voltage will cause decreased lamp life. Wide voltage fluctuations result in a combination effect of decreased light output and decreased lamp life, and they should be corrected by voltage regulation.

Lighting systems which are adequate when installed will rapidly depreciate if not properly maintained. Maintenance should be based upon a regular and systematic schedule and should include a system of reports and checks. When the illumination in an installation decreases to 75% of its initial value, the equipment should be cleaned. Group replacement of lamps based on an operating schedule should be used, particularly in production areas where replacement is difficult and time-consuming.

Preventive Maintenance Lowers Truck-Repair Cost

Planned preventive maintenance assures reduced service budgets, longer truck life, and less down time while trucks undergo repair, according to Charles Greener, general service manager, Automatic Transportation Co., Chicago, Ill. Mr. Greener outlines here 14 ways to lower operating costs of electric industrial trucks. They are:

1. Don't overload trucks. Exceeding truck capacity causes serious break-

Where quality
is the
first consideration
in a fabric
there is
no substitute for

Celanese®

Acetate Rayon Yarn

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Smoother production, easier selling with
LAUREL NYLON HOSIERY FINISHES

Assure you better lubrication and increased elasticity. Yield softer, more beautiful hosiery with greater freedom from snags and wrinkles. Laurel Finishes improve your manufacturing and selling *and* profit position. Let our Technicians arrange a test for you. Write today.

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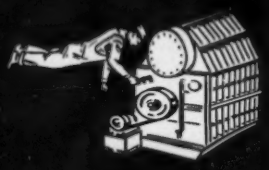
You'll Seldom See
Your Maintenance Man
Hovering Over A
UNI-PULL DRIVE



A passing glance is usually all the attention a Uni-Pull drive needs from a maintenance man.

HERE'S WHY...The motor base automatically maintains belt tension...assures uniform pull around the pulleys...eliminates slide-rail tension-guesswork.

The flat leather belt pulls as a unit. No separate and uneven tensions. No danger of the misalignment wear you can get with multiple, groove-trapped belts.

If you're interested in years of service with minutes of maintenance, ask your leather belting supplier about Uni-Pull.

American LEATHER BELTING *Association*
Headquarters for Authentic Power Transmission Data
41 PARK ROW, NEW YORK 38, NEW YORK
AL 52

***AN ENLARGED COPY** of the manufacturer's instruction chart will help your maintenance man lubricate your trucks properly. A planned* **procedure of preventive maintenance means longer life and greater operating efficiency.**

downs and excessive tire bills.

2. Keep floors clean and in good condition.

3. Replace tires when they develop flat spots or when big chunks of rubber are gouged out.

4. Let the right man—the mechanic—do the repair job.

5. Train each operator thoroughly in the use of the equipment assigned to him.

6. Obtain full information about operation and care of any new trucks you get.

7. Follow a regular schedule in your mechanical maintenance program.

8. Give your trucks a monthly lubrication and mechanical check.

9. Give a more extensive mechanical and lubrication check semi-annually.

10. Conduct electrical checks on a weekly, monthly, and semi-annual basis.

11. Be careful with your batteries. Don't overwater, and inspect them weekly.

12. Schedule general overhauls according to your operating conditions.

13. Keep a weekly log for each truck. Record inspections, lubrications, and cleanings.

14. Consult the manufacturer's service representative if you are operating under adverse conditions. The program outlined above is for units on one shift a day under favorable operating conditions.

Save TIME, MANPOWER AND MONEY!

STIENEN
Leads in the LEADER
OBERMAIER

The New System of Package Dyeing, Extracting and Drying

- Straight Line Flow
- New Dye Spindles
- Stainless Steel Construction

Extracting and Drying in a Single Operation in 90 to 120 minutes.

Here, indeed, is another proof of Stienen-Obermaier leadership.
The new complete cycle system of Package Dyeing, Extracting and Drying.

Our new dye spindle* provides greater flow than any other previous spindle and results in more positive level dyeing. Moreover, Stienen-Obermaier's straight line flow principle is the most efficient circulating system developed. The new combination Extractor-Drier* substantially reduces labor costs and cuts drying time in more than half. For complete all-around superiority and economy, we suggest you see the new "Complete Cycle System."

Another Stienen-Obermaier first!

BUILDERS OF
COTTON, WOOL AND RAYON DYEING MACHINES
FOR BEAMS • PACKAGES • RAW STOCK • SKEINS • CAKES
DYE SPINDLES • PERFORATED TUBES
CENTRIFUGAL PUMPS • EXTRACTORS AND DRYERS

* Pat. Pend.

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Why pay extra for refrigeration?

What's that? You've *got* air conditioning? Well, so you have. I recognize that air washer. One of ours.

Glad to hear it. When it comes to keeping your relative humidity right on the line . . . well, you can't beat a Carrier evap cooling system.

The mill seems hotter than it used to be? Well, maybe you're running some of these new synthetics. In which case you've had to reduce your relative humidity and naturally increased your temperature. Then, too, you've got more machines, running faster, and better lighting. The added heat load may be too much for your evap system. That would show up in reduced relative humidities. Or, maybe it's just hotter outside.

You know, up to now, we've been talking relative humidity, but your effective temperature is climbing, too. Effective temperature? Well, that's the temperature that you and I feel.

Reduce it and you've got more effective workmen. And more production per dollar of labor costs.

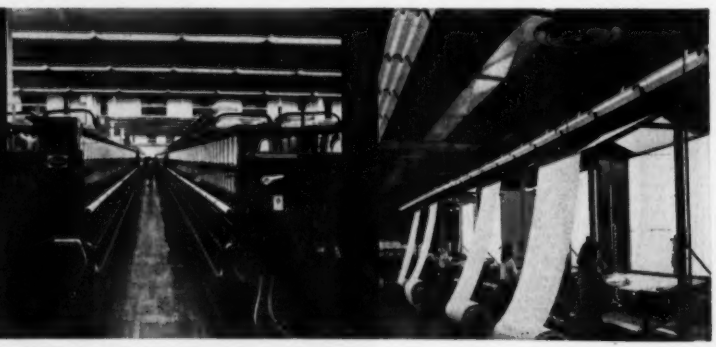
How do you reduce it? That's where refrigeration comes in. And it's easy. You just feed *chilled* water into that air washer. Do that and you control your air completely.

Should *you* add refrigeration? Well, that depends. But this much is sure. Every textile mill is riding a trend line that's going *up*. And sooner or later you'll add that refrigeration. The trick is to add it at exactly the right time. That's the way to make it pay off.

P. S. We think we can help you decide what is the right time for your mill. Carrier Corporation, Syracuse 1, N. Y.

Carrier

AIR CONDITIONING
REFRIGERATION
INDUSTRIAL HEATING



At Robbins Mills, Inc., North Carolina, chilled spray water holds the temperature at 80 degrees, permits changing relative humidities to suit the fiber being run. A 1200-ton Carrier Centrifugal chills water for nine separate systems.

At Gerrish Milliken, South Carolina, Carrier Air Conditioning with refrigeration increases production, decreases faults. Individual chilled water controls allow relative humidity to be varied while holding the temperature constant.

For more information, write direct or use Reader Service post card.

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SQUIRREL CAGE DUSTER by SARGENT

SARGENT'S *Ceiling Condenser — Model 20, single cylinder, 18" or 36" diameter cylinders.*

SARGENT'S *Automatic Feeder for scouring machines, openers, pickers, dusters, etc.*

SARGENT'S *Heavy Duty Mixing Picker — rugged, high-production unit.*

SARGENT-designed for continuous dusting of card waste, grease wools, carpet wools . . . highly efficient for blending . . . absolute minimum of broken fibres . . . variable speed control . . . available with enclosed housing and exhaust fans for removal of dust as it is separated from fibres . . . DUSTER may be set on sub-base with drag conveyor for continuous dust removal from under machine . . . the ideal line for peak, quality production consists of bin-type feeder, mixing picker, SQUIRREL CAGE DUSTER and ceiling condenser.

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SINCE 1852

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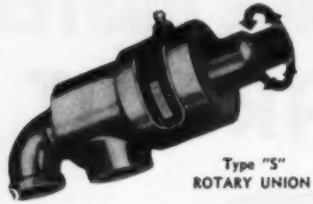
ROTARY UNIONS

TRADE NAME



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Save Money and Increase Production

These revolving steam connections require practically no maintenance for months on end . . . no tightening, no repairs, no parts . . . and cut mechanics' time way down. They save on steam and materials and cut power consumption by 30% to 80%. Positive sealing at steam pressures up to 200 PSI.

Ball bearing construction permits high speeds and prevents stretching of warps. Other exclusive features prevent operating failures and reduce down-time.

Write today for Catalog 600-I and learn how you can save money and increase production by using ROTARY UNIONS on your slashers, dry cans, calenders, printing, and coating machines.

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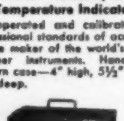
Hair-operated and calibrated to professional standards of accuracy by the maker of the world's finest weather instruments. Handsome, modern case—4" high, 5½" wide, 1⅝" deep.

Model HA/2 Hand Aspirated Psychrometer

Accurate readings obtainable without special skill. Psychrometric readings can be taken at any point desired however inaccessible.

Model 160 Portable Humidity and Temperature Recorder

3" x 5" charts, 10 or 30 hour records. Modern design...handy for small space and difficult locations . . . built to meet unusual conditions.

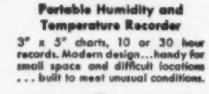


Model 594 Hygrothermograph

The foremost relative humidity recorder for laboratory, factory, and office use. Scientifically designed for accuracy and dependability.

Model 573 Motor Aspirated Psychrometer

Designed to determine wet and dry bulb temperature with laboratory accuracy—Motors supplied for use on 115 V., 50 cycles or 60 cycles.



Model S/1 Pocket Sling Psychrometer

A small, low cost instrument. Thermometers graduated in 1° increments from +35° F to +110° F. Furnished complete with case and psychometric slide rule.

Model 550 Sling Psychrometer

Manufactured to U. S. Weather bureau specifications. Thermometers graduated in 1° increments from −20° F to +120° F, or −35° C to +49° C.

FRIEZ INSTRUMENT

DIVISION OF

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Baltimore 4, Maryland

Bendix AVIATION CORPORATION

Export Sales: Bendix International Division, 72 Fifth Avenue, New York 11, N. Y.

SandwichMixRecommended For Improved Blends

Technical Editor:

Which is the better way to run a synthetic-fiber-and-cotton blend—to make a sandwich blend in the picker or to blend on the drawing frame? (9431)

The sandwich mix is generally recommended for a better percentage control of the different fibers in the blend. There is also danger in blending on the drawing frame of getting the wrong number of cans of each kind of stock up to the back of the frame.

Laying down a sandwich mix involves the extra labor of weighing and spreading each layer. Unless the laying down of the mix and vertical feeding from the pile is done carefully, large variations in fiber percentages can occur. There are blending devices now available that are said to give good results on fiber blends without batch weighing. If large amounts of blended stock are required, it would pay to consider a trial of these blenders.

There are several advantages claimed for draw-frame blending. All bulk weighing of stock is eliminated. In the picking and carding processes on 100% synthetic staple, all the waste is clean and free from trash and can be re-used directly with little loss. Machine settings and speeds can be adjusted to suit the synthetic fiber with resultant reduced waste and less possible injury to the staple.

Tape Life Lengthened By Careful Maintenance

Technical Editor:

The condenser tapes on our woolen cards have an average life of 18 to 20 mo. on three-shift operation. Is this considered a normal tape life? What effect, if any, would the type of wool oil used have on the life of tapes? (9432)

The normal life of woolen-card tapes is from 18 to 24 mo. at 120 hr. per week. Excessive use of the right oil on

Custom-Made Protection

DILEINE AND MELEINE

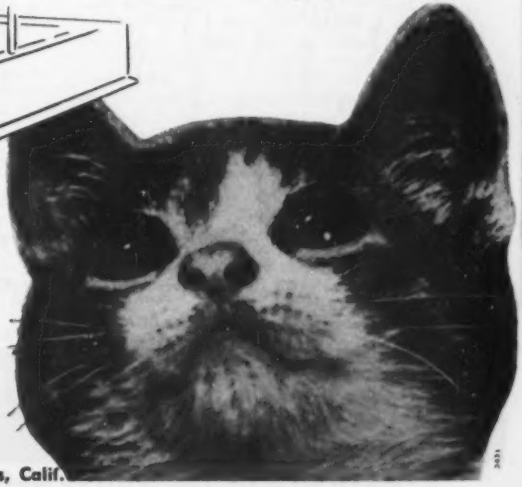
For a Wide Range of Gas Fading Protection Formulated to Meet Your Specific Needs

The Dileine and Meleine series of inhibitors offer you a complete range of gas fading protection when used in the dyeing or finishing process. They can be custom-formulated to meet *your* specific problems and plant conditions.

The application of Dileine in the dyebath does not require a predyeing operation. Dyeing may be carried out at high temperatures when Dileine and dyestuff are used simultaneously in the dyebath.

In the finishing process, Meleine is particularly recommended for fabrics that have been treated with resin finishes. It assures you of a smooth, mellow hand to the fabric finish.

If you have a specific problem our technical service department would welcome the opportunity of submitting samples . . . custom-formulated to meet your individual problem.



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Chemicals PASSAIC, N. J.

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NEW "LIFETIME" DYE-TUB THERMOMETER

...as easy—
to read at 70°
and 130°
as at boil

No matter whether you are dyeing naphthols, vats, or acid colors, you can always be sure of accurate dye temperatures with the new Foxboro "Lifetime" Dye-Tub Thermometer. Five-inch dial features 10¾" *uniform scale* — can be read with equal ease and accuracy at all temperatures in its range.

Specifically designed for dye-tubs, this thermometer is also ideal for scouring, rinsing, and other uses. Completely protected against corrosive liquids, fumes, and vapors. Aluminum alloy case is vapor tight. Bulb and capillary are one continuous welded assembly of type 316 stainless steel. Strong, flexible ⅛" capillary is damage-proof . . . even tougher than conventional capillary plus protective tubing!

Why not improve your operation with the new Foxboro Dye-Tub Thermometer? Now available from stock. Write for complete details. **The Foxboro Company, 846 Neponset Ave., Foxboro, Mass., U.S.A.**

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You can minimize procurement problems these days by depending upon your local Fairbanks-Morse Sales Center as a common source for the bulk of your requirements for electric motors, pumps, scales and diesel engines.

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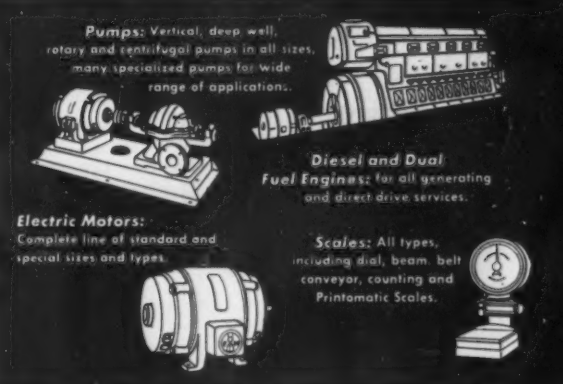
Pumps: Vertical, deep well, rotary and centrifugal pumps in all sizes, many specialized pumps for wide range of applications.
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Our package dyeing method makes us by far the leading factor in the U. S. on the coloring of acetate yarn.

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Dyers and Converters of Synthetic Yarns for All Industries

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the fiber can shorten the life of condenser tapes as much as use of the wrong oil. The percentage of oil used in different mills varies from 3 to 8%, depending on the type of wool used. Uniform application of the oil is considered essential for good results.

The care given to card tapes is an important factor in the life of tapes. Mills getting long tape life have some regular schedule of tape maintenance. Neatsfoot oil or a similar leather dressing is used to lengthen tape life.

One-Process Drawing Is Often Profitable

Technical Editor:

We are making yarn counts up to 20s from 1-in. cotton with two-process drawing, long-draft slubbers, and single roving in the spinning. Would it be possible to reduce our drawing to one-process or eliminate it entirely without sacrificing yarn quality? (9433)

The reduction to one-process drawing in other mills on similar work has proved feasible and profitable. Comparison of yarn made from one- and two-process drawing shows but a slight loss in strength for the one-process. The yarn-standard appearance of both was equal to "B." There was no difference in end breakage on slubber or spinning frame between the one- and two-process stock. Loom stoppage was practically the same in both cases. One mill test of one-process drawing showed the best results with eight ends up on drawing and a draft of 7. The increased parallelization of fibers caused by the increased drafting was said to account for the improvement.

One mill is running on coarse numbers with card sliver direct to slubbers. No authentic information is available from this particular mill as to end-breakage and quality results. Similar tests made in other mills, however, show that increased end breakage on roving and spinning and increased loom stoppage offset a large part of the savings in the elimination of the drawing frames.

Dyeing Rayon Yarn On Cheeses

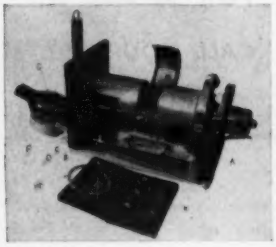
Technical Editor:

Can you tell us how to prevent sticking of rayon yarn on cheeses? We dyed cheeses experimentally but found that the layers of yarn stick together, especially at the cheese core. The dyeing itself was quite satisfactory except for this trouble. (9434)

Sticking of rayon yarn on cheeses could be caused by many conditions.

First, the inquirer does not tell us

AIR POROSITY TESTER



An apparatus for use in measuring the air flow through textile products and similar materials in cubic feet per minute

Write for literature and prices

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1415 Park Avenue

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Weave Mills that require

COTTON FILLING

of

HEAVY PLIED YARN or CORD

Rely on

LAZENBY WINDERS

For any kind of yarn going into the shuttle we can supply Cop & Bobbin Winders to produce maximum yardage and uniformity.

Send us a small supply of your yarn and we will wind and return with Testwind Report and Catalog.

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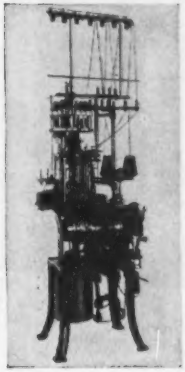
Saves Labor and Yarn Costs...Knits a Better Sock

THE S&W MODERN KOMET WRAP MACHINE



The inside-out S&W Komet Wrap sock (above, left) has a two-color side clock with only 2 wrap yarns for each clock—4 per sock. In similar sock (right) not made on an S&W Machine, there are 13 wrap yarns in each clock—26 in all—to break and trim. Compare savings in labor and yarn costs!

"My knitters can now handle *one-third* more machines, at a saving in labor costs."

"Down time due to yarn breakage in my mill was cut considerably."

"...saves up to two-thirds in wrap yarn consumption."

Mill operators are wholeheartedly endorsing the labor- and yarn-saving features of the S&W Modern Komet Wrap Machine, as well as the fact that it knits a superior sock.

In producing smart embroidered clocks with wrapped patterns *in a single automatic operation*, this machine effects a tremendous reduction in wrap yarn wastage and breakage. Employing panel needle wrapping, where advantageous, instead of only individual needle wraping, it effects savings up to two-thirds in wrap yarn consumption, with resulting savings in labor due to yarn breakage and in machine down time. Furthermore, the finished sock is smoother and neater-looking on the inside, since there are fewer yarn ends.

For high quality wrap hose at a new low cost, investigate the S&W Modern Komet Wrap Machine.

Two of the many pattern varieties which can be produced at great savings on the S & W Modern Komet Wrap Machine.

S·W

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USTER Cuts Loom Down Time (For Tying) 15%

The Uster Warp Tying Machine is setting new high standards in speed and economy. Mill after mill reports savings in loom down time, in labor, and in better work. We will be glad to show you how you can achieve similar savings.

how the Pelzer Plant* does it—on "Curity"® Diapers

Operator in the background is preparing a second pattern on an extra frame. It takes less than a minute to transfer the tying head from one frame to another.

Tying the prepared pattern at 250 knots per minute. Note that the machine is almost directly over the loom beam—a valuable feature where space is crowded. Insert . . . Combing the warp before tying.

*The Pelzer Plant of Kendall Mills weaves "Curity" diapers. Beams run about 3400 ends of 26's cotton.

This plant reports that standard tying production is 25 warps in 8 hours. They save 15% in loom down time, when compared with their previous method of mechanical portable tying . . . a 24% saving in actual tying time . . . and saves the time of two operators. 24% less time is required for starting up the looms . . . pulling knots through, redrawing ends, etc.

● Ties the entire warp at one "bite"

● Precision Mechanism of unmatched speed

● Compact—Convenient—Versatile

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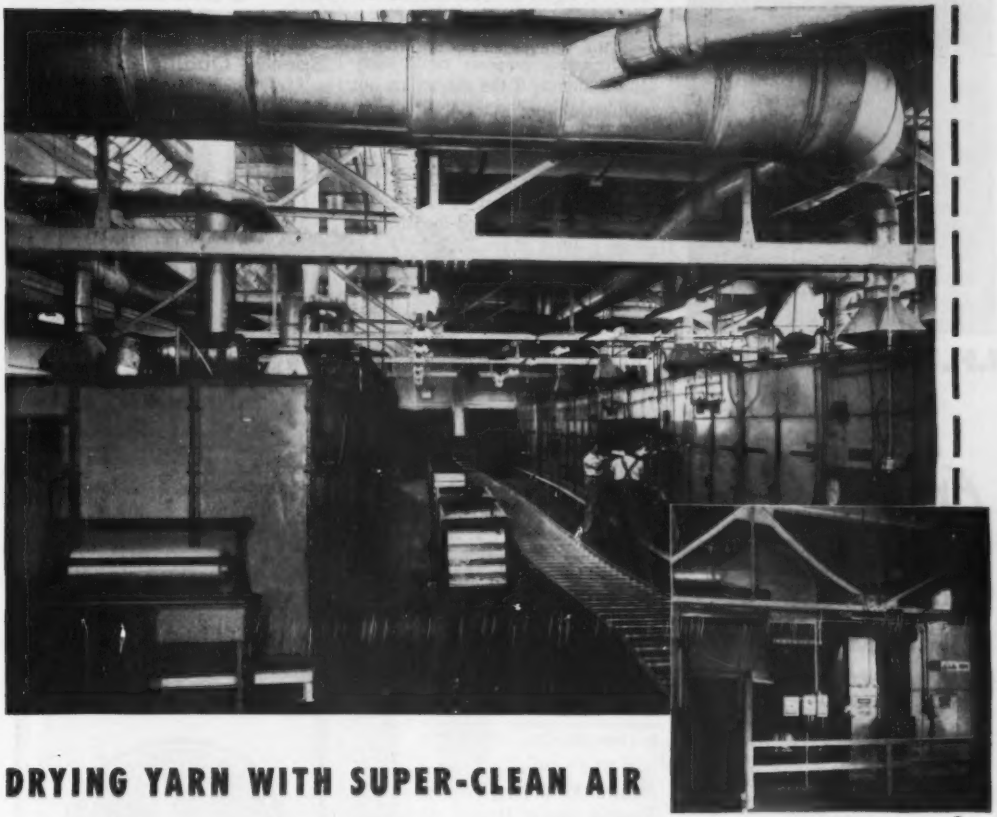

DRYING YARN WITH SUPER-CLEAN AIR

Saves material and costly handling

ELIMINATING dust and soot solved a costly problem for this large bleaching and dyeing plant. Before Electro-MATIC precipitators were installed, the air circulating through the dryers was contaminated with air-borne dust and soot particles. These discolored the finished yarn during the drying process causing soilage, extra handling, and quantities of rejected material.

Now AAF Electro-MATIC precipitators furnish *super-clean* air to the Proctor-Schwartz dryers shown above. Costly handling and rejects are minimized . . . even pastel colors are safe from soiling. Providing highest cleaning efficiency—from smoke to largest air-borne material—the Electro-MATIC'S self-cleaning feature and automatic operation also eliminate *shut-downs* and reduce *man-hours* required by ordinary manual maintenance.

AAF filters and precipitators have solved many costly production problems for the textile industry. If you have a process that may be improved by *super-clean* air, call your nearby AAF representative. The company's thirty years experience and complete line of air cleaning products assure you of a practical solution.

AAF American Air Filter COMPANY, INC.

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I.H.E. PRE-DRYERS

UTILIZE EXHAUST HEAT

To Provide a More Profitable Drying Operation

Function of this Pre-Dryer is to raise fabrics up to drying temperature before entering tenter house, which is accomplished by using treated air from the direct-fired tenter. This increases tenter house capacity by 15% to 20%, and gets maximum use of exhaust heat.

Air from the tenter's exhaust is distributed evenly over both sides of the cloth, which is festooned over 5 to 9 stainless steel rolls driven by friction clutches.

Please write for detailed information.

SPECIALIZED DRYING, CURING AND SINGEING EQUIPMENT FOR THE TEXTILE INDUSTRY

INDUSTRIAL HEAT ENGINEERING CO.
121 CLEVELAND ST.
GREENVILLE, SOUTH CAROLINA

whether the rayon is viscose or acetate. If the cheese is made up of acetate yarn it is highly possible that the acetate dyes by themselves, being of a colloidal nature, have a tendency to bind the yarn together. Soaps used for dispersing purposes could easily cause gumming if the cheeses are not completely rinsed.

With viscose yarn, penetrants and synthetic detergents could also cause this same condition. Hard water would be very likely to cause a precipitation of any fatty materials and create the condition described by the inquirer.

We would recommend that the dyer check into the qualities of the water, the nature of the scouring or dispersing agent, and the method of washing after dyeing.

If the package is properly made, we believe a large part of the trouble can be eliminated by the use of a complex phosphate to take care of any hardness (if such hardness is found), a free-rinsing penetrant (not susceptible to reaction with lime or magnesium), and additional rinsing time after dyeing.

Look for These Qualities In a Wetting-Out Agent

Technical Editor:

We are interested in securing the best mercerizing penetrant possible. What are some of the qualities we should look for in a material of this sort? (9435)

1. The wetting-out agent should dissolve to a clear liquid in 55° Twaddle caustic. It must not become turbid or cause separation. It should not be volatile or contain volatile fractions. In prolonged use, the agent should not lose its initial qualities. When the caustic is diluted (in rinsing the cloth on the machine), the agent or its components should not deposit impurities on the fiber in the course of bleaching or dyeing.

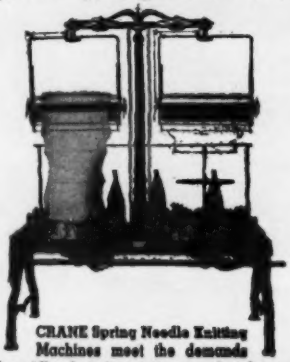
2. The chemical and physical action of the caustic on the cotton must not be harmfully modified by the agent. The wetting agent must not foam during the run on the machine. The formation of foam causes the caustic to soak in less readily in certain cases and may lead to uneven results. Foam forms carbonates in the caustic air. The agent must have no effect on the bleaching and dyeing processes and must not damage the fiber.

3. The period of wetting out during the time that the cloth is totally immersed in the caustic and its effect on shrinkage are important factors in determining the efficiency of a wetting-out agent. Products that wet out

1870 CRANE 1951

SPRING NEEDLE KNITTING MACHINES

Speed - Quality - Low Cost



CRANE Spring Needle Knitting Machines meet the demands of rapidly changing patterns and styles on all weights of fabrics.

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LAKEPORT, N. H.

streamline your textile processes with "high-light" Kreelon

Want to make better goods . . . faster . . . cheaper? You can do it with Wyandotte "high-light" Kreelon*. That is, *if* you use Kreelon creatively. Here's what we mean. Kreelon is highly soluble in water . . . more *totally* soluble than any other detergent of this type we've tested. That means Kreelon is easier-rinsing. Creative suggestion: experiment with the time period allotted to rinsing, the amount of water you use, and its temperature. Chances are you'll save money on water and fuel.

Here are some facts on "high-light" Kreelon for your creative use: Kreelon is stable in acid, alkaline or neutral solutions. (Suggestion: you need not scour in an alkaline media.) Kreelon works more quickly than soap in most operations and at lower temperatures. (Suggestion: you can reduce processing time in scouring, dyeing and acetate saponification.)

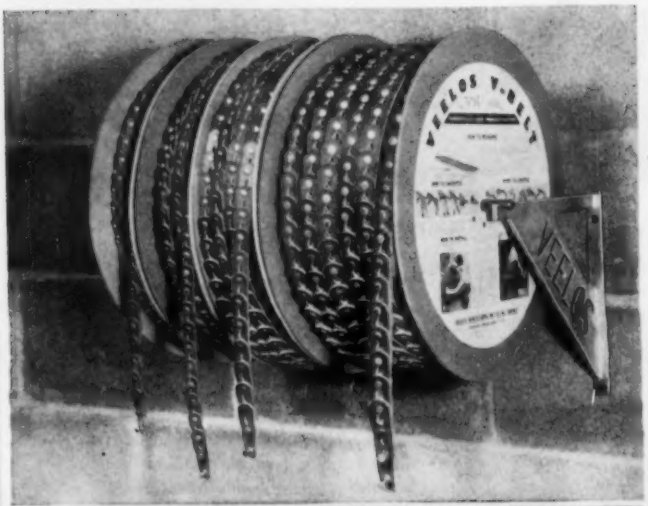
*Reg. U. S. Pat. Off.

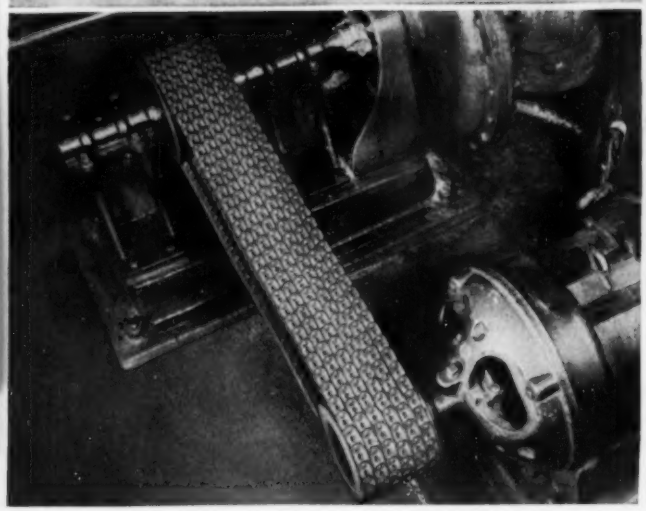
SODA ASH • CAUSTIC SODA • BICARBONATE OF SODA
CALCIUM CARBONATE • CALCIUM CHLORIDE • CHLORINE
HYDROGEN • DRY ICE • SYNTHETIC DETERGENTS • GLYCOLS
CARBOSE (Sodium CMC) • ETHYLENE DICHLORIDE • PROPYLENE
DICHLORIDE • AROMATIC SULFONIC ACID DERIVATIVES
OTHER ORGANIC AND INORGANIC CHEMICALS

WYANDOTTE CHEMICALS CORPORATION
Wyandotte, Michigan • Offices in Principal Cities

Wyandotte
REG. U. S. PAT. OFF.

Veelos—*the Adjustable V-Belt*
Pays for Itself





In Inventory . . .

Veelos pays for itself by reducing required v-belt stocks. Just 4 reels of Veelos cover *every* v-belt need (up to 316 sizes) in the O, A, B and C widths. Stock only one reel for each width of belt you use—and *any length is readily available.*

In Maintenance . . .

Veelos pays for itself because it can be installed quickly and easily without dismantling outboard bearings or moving motor. Individual belts can be adjusted by simply removing or adding links.

In Operating Efficiency . . .

Veelos pays for itself because uniform tension can be maintained on all belts to provide vibrationless, full power delivery. Simple adjustment of each belt means that *matched sets stay matched.*

Write for your copy of the Veelos Data Book. It gives the complete story on why *Veelos pays for itself.*

MANHEIM MANUFACTURING & BELTING COMPANY
Manheim, Pennsylvania

ADJUSTABLE TO ANY LENGTH • ADAPTABLE TO ANY DRIVE

Made in all widths in three types; regular, oil-proof and static conducting. Also double V in A and B. Packaged on reels in 100-foot lengths. Sales engineers in principal cities; over 350 distributors throughout the country. Veelos is known as VEELINK outside the United States.

VEELOS
THE LINK
V-BELT

Giving a loom the comfort it loves

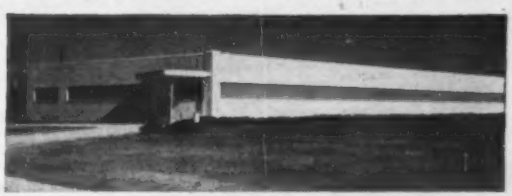
IN THIS NEW MILL of the Jaclyn Hosiery Mills, Inc., Camden, South Carolina, maintenance of desired temperature and humidity levels is facilitated by the use of PC Foamglas Insulation on the roof and in the core-walls. Architect: Irving M. Fenichel, New York, N. Y.

Precision machinery works more efficiently—just as people work more comfortably—in mills where temperature and humidity are kept at predetermined levels. That is why so many textile mills are insulated with PC Foamglas.

This unique material insulates walls and floors, roofs and ceilings over unusually long periods of time. Freedom from costly repairs, maintenance and replacement makes Foamglas—on a cost-per-year basis—the most economical insulation you can use.

When you are figuring on insulation, make sure you have the latest information on PC Foamglas. Send in the convenient coupon for a sample of Foamglas and a copy of our informative booklet.

PITTSBURGH CORNING CORPORATION
PITTSBURGH 22, PA.



The **best** glass insulation is cellular glass. The **only** cellular glass insulation is PC Foamglas. This unique material is composed of still air, sealed in minute glass cells. It is light-weight, incombustible, vermin-proof. It has unusually high resistance to moisture, chemicals and many other elements that cause insulation to deteriorate.

Pittsburgh Corning Corporation
Dept. V-61, 307 Fourth Avenue
Pittsburgh 22, Pa.

Please send me without obligation a sample of Foamglas and your FREE booklet on the use of PC Foamglas Insulation for Normal Temperature Commercial, Industrial and Public Buildings.

Name .....

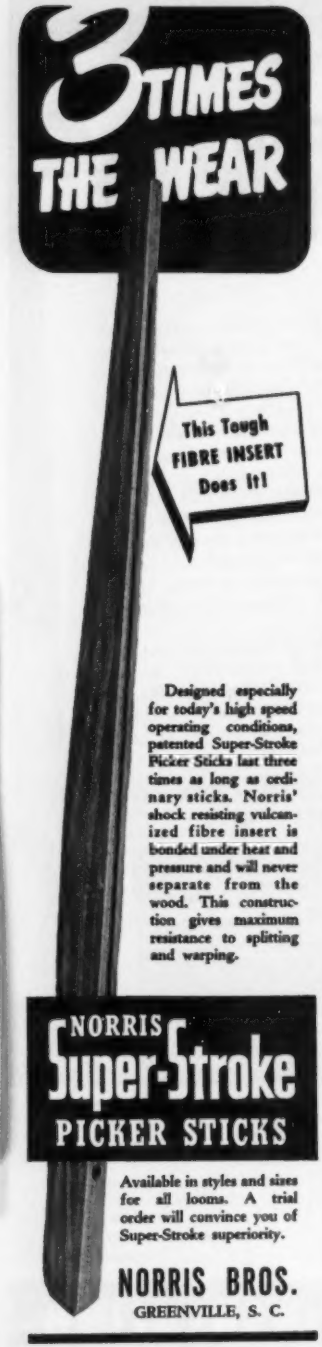
Address .....

City ..... State .....

PITTSBURGH ® PC CORNING **FOAMGLAS cellular glass INSULATION**

... when you insulate with FOAMGLAS... the insulation lasts!

For more information, write direct or use Reader Service post card.



Designed especially for today's high speed operating conditions, patented Super-Stroke Picker Sticks last three times as long as ordinary sticks. Norris' shock resisting vulcanized fibre insert is bonded under heat and pressure and will never separate from the wood. This construction gives maximum resistance to splitting and warping.

NORRIS Super-Stroke PICKER STICKS

Available in styles and sizes for all looms. A trial order will convince you of Super-Stroke superiority.

NORRIS BROS.
GREENVILLE, S. C.

slowly have a much more favorable effect on shrinkage than those agents that act too quickly. Attention must be paid to this point as the shrinkage is in direct relation to the swelling of the fibers, and on this swelling depends the luster and affinity of the cotton for coloring matters.

4. The wetting-out agent must not attack the iron parts of the mercerizing machine nor the rubber of the squeeze rolls. This is a *must not*.

5. The wetting-out agent must have no harmful effects on any of the treatments making use of residual caustic and alkaline rinsing waters, for they are of prime economic necessity in mercerizing plants. Being able to use reclaimed caustic in a number of processes makes the cost of mercerizing much less than it would be otherwise. The agent must be very stable in these much weaker concentrations of caustic.

6. A mercerizing wetting-out agent will have to work well in concentrations from 20° Twaddle to 60° Twaddle and from 60° to 110° F.

7. The price of the wetting-out agent is important when unbleached cloth has to be mercerized. The price and quantity to be used may determine whether the process is adopted.

Eliminate Section Streaks In Warping Wool

Technical Editor:

We dress our fancy worsteds and woolens from cone creels through a back reed and leasing comb to a tension roll, then through a neck reed to a 4-yd. barred reel. We then beam sectionally from reel to full-width loom beam. Our reel is pinless and is equipped with a Davis & Furber pinless reel attachment.

Please tell us how to eliminate section streaks caused in warping. Our warps contain an average of 4,000 ends and are beamed 72 in. wide. Sections contain 200 to 260 ends. These streaks occur in both stock-dyed and piece-dyed goods. (9436)

Section marks are caused by an uneven tension in the warp ends. There are a number of conditions which may cause this trouble. Each section should be wound on the reel with the same tension. Evenness of tension is easily determined by looking at the reel after the yarn is wound on it. If the same tension is used, all the sections will be the same height. A loose section will be high and a tight one will be lower than the rest. An overlap or underlap of the sections will also cause trouble.

The reel should be inspected before beaming to make sure that all the sections are even. After the yarn is wound on the loom beam, it should

For Cotton Yarn and Fabrics

use

ROSALMINE-H

Boils out and scours at the same time and eliminates the need of using a penetrant.

Disperses the dyestuff for level dyeing.

Easy to use — economical.

Equally effective on yarns, knitted or woven fabrics.

So. Office - 617 Johnston Bldg., Charlotte, N. C.

RICHMOND OIL, SOAP AND CHEMICAL COMPANY INC.

Export Agents HOWARD G. GODFREY AND CO., INC. 456 Fourth Ave. N. Y. 16, N. Y. Cable Address Godfreyorn

HELPFUL SOURCE...

of Buying Information

As Textile Engineer at the Spartanburg, South Carolina office of Lockwood Greene Engineers, Inc., Mr. Thomas O. Ott, Jr. makes good use of McGraw-Hill's Textile Catalogs.

This valuable source of buying information on all types of textile machinery, equipment, supplies and services has been, in Mr. Ott's own words:

"... most helpful in locating machinery manufacturers."

If PRE-FILED TEXTILE CATALOGS is not available for buying reference at your mill, write to McGRAW-HILL CATALOG SERVICE, 330 West 42nd St., N.Y. 18., N.Y. There is no charge to qualified users.

For those tough *Special* jobs that just have to be right . . . depend on

WILDMAN "30" INTERLOCK MACHINE

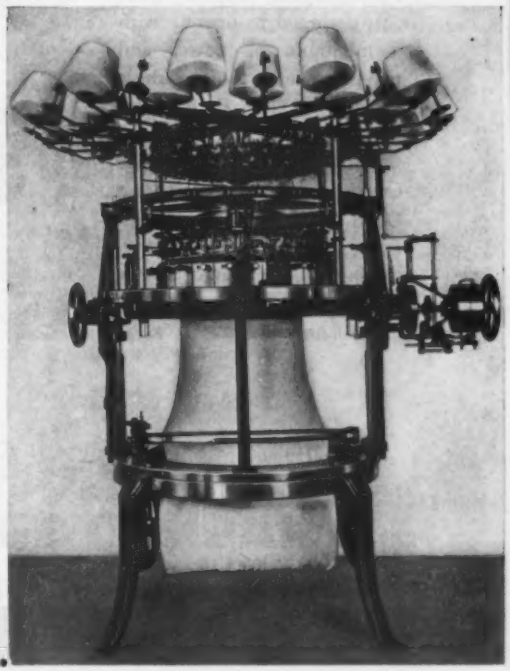
designed for

SPORTSWEAR

UNDERWEAR

DRESS FABRICS

OUTERWEAR



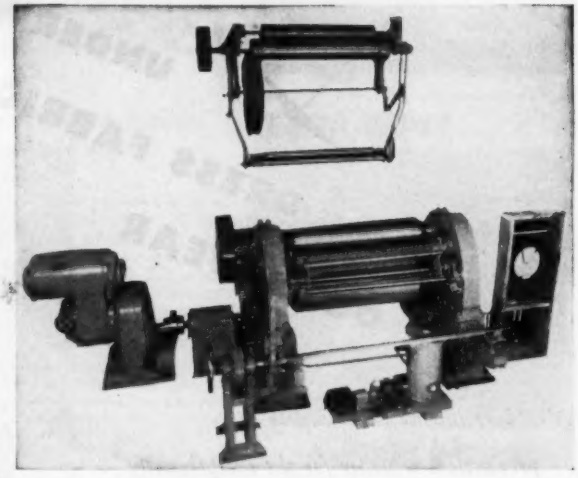
Yes, here indeed is versatility in production, whether for the exceptionally wide fabric or standard widths—the WILDMAN 30" INTERLOCK MACHINE assures top performance, top efficiency . . . Popular sizes 26" and 30". Also other sizes from 15" up, furnished in all cuts up to 24 needles per inch.

WILDMAN MFG. CO., NORRISTOWN, PA.

. . . Calender Rolls, both new and refilled, of all types, from America's most complete line of filled rolls, well deserve to be called "America's Finest" because of their long life and better performance.

We've Named These "Appleton" --you'll call them "America's Finest"

. . . Two Roll Embossing Calender . . . compact, ruggedly built . . . designed to operate with a minimum of power and maintenance . . . offers these features — 10" Bored Steel Roll, 20" APPLETON Special Wool Felt Roll, Air Pressure Cylinder with Recording Chart, Anti-Friction Bearings, Force Feed Oil Lubrication, Ceiling Folder, Direct Motor Drive with Variable Speed. Truly "America's Finest".



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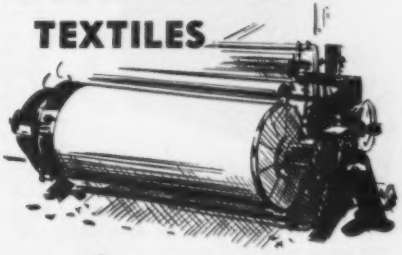
APPLETON WISCONSIN

Custom Builders of Textile Finishing Equipment . . Friction Calenders
Silk Calenders . . Schreiner Calenders . . Rolling Calenders

Clean, Fresh Air:

FOR BETTER QUALITY TEXTILES



"Buffalo" INDUSTRIAL EXHAUSTERS

"The better the dust control in your air, the better the quality in your product"—and efficient exhaust is fundamental to a cleaner atmosphere. "Buffalo" Industrial Exhausters can handle airborne dust, smoke, fog and fumes—or materials you wish to remove pneumatically. These sturdy, all-welded steel plate fans have factory-balanced wheels with blades shaped for efficiency—not the "paddle-wheel" type. The smooth, all-welded housing and blades mean minimum friction loss—for low operating cost and easy cleanout. Clean air is profitable air—don't be without dependable "Buffalo" exhaust. Write for Bulletin 3576.

"Buffalo" BELT-AIR FANS

Flexibility and low cost are the big advantages in ventilating with "Buffalo" BELT-AIR FANS. In 24", 30", 36", 42"and 48" sizes, (4400 to 19,000 cfm) they fit a wide variety of local ventilation needs. Their husky die-stamped square panel frame makes them easy to install in walls. Their die-stamped blades are shaped for quiet, efficient delivery. BULLETIN 3222-F describes these and other ventilating units to suit many applications. Your copy will be mailed on request.

"Buffalo" FIRST FOR FANS

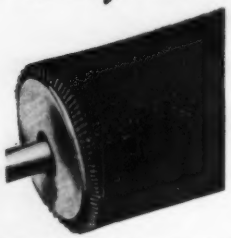
BUFFALO FORGE COMPANY

184 MORTIMER ST. BUFFALO, N. Y.

Canadian Blower & Forge Co., Ltd., Kitchener, Ont. Branch offices in all Principal Cities

VENTILATING FORCED DRAFT | AIR WASHING COOLING | AIR TEMPERING HEATING | INDUCED DRAFT EXHAUSTING PRESSURE BLOWING

"INDUSTRIAL"
Raising Brush



CAN'T STREAK GOODS

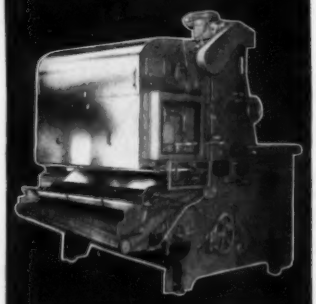
Because of the uniform, dense surface presented by the nylon bristle of this metal core brush, every bit of the nap in woolens and worsteds is raised and properly sheared. This brush can't streak goods as tufted brushes do. Because of its metal core the brush remains in perfect alignment throughout its life.

Used by leading woolen and worsted manufacturers.

Write for full details and prices.

INDUSTRIAL BRUSH COMPANY
Woodside Avenue Little Falls, New Jersey

Geo. S. HARWOOD & Son



SPECIALISTS
IN TEXTILE
FEEDING
MACHINERY
SINCE 1863

50 LAGRANGE STREET
WORCESTER 8, MASS.

also be inspected for high and low sections.

The position of the section marks will also give a clue to their cause. If the marks are in the same position in a number of cuts, it would be a good plan to watch the beaming at that point.

The fact that you are using small sections of only 200 to 260 ends also increases the chances of section marks. By using 17 to 20 sections on a pinless reel, unless the operator is very careful, overlapping or underlapping of the section may result.

Some mills overcome this trouble by running the yarn from the loom beam through a slasher in one sheet. This method has a tendency to overcome any high or low spots or uneven tension.

It would seem that your trouble is caused by one of these conditions. It would also be interesting to know if this trouble has always been present in your plant or is just starting. I would suggest that you request a skilled man from some other mill that uses your method to visit your plant and check each operation.

There is also a possibility that these marks may be caused by weaving conditions. Reed marks and heddle marks sometimes have the appearance of section marks. Check the loom reeds for uneven dents. Make sure that the quarter hooks in the harnesses do not cause the heddles to bunch up. Bunched-up heddles will chafe the warp yarn and cause a warp streak.

No "Legal" Standard for Yarn Breaking Strength

Technical Editor:

Is there a standard for yarn breaking strength that is recognized and accepted by the whole textile industry?

Our problem is this: We make yarn that is perfectly acceptable in strength, according to the Draper Standard for yarn breaking strength; yet, just the other day we had a shipment turned down because of strength. The customer stated that the yarn was not strong enough, regardless of its being well up to the Draper Standard. (9429)

In a matter of this nature, you have no choice except to abide by the customer's wishes. The Draper Standard is only a reference point; it is generally recognized and used, but it is entirely without authority so far as litigation is concerned.

If your customer demands yarn of certain strength, he is perfectly free to decline to do business with anyone who does not provide him with that yarn.

42
STOCK SIZES
IN
HALLOWELL®
SOLID STEEL
COLLARS

Precision machined for shafts from ¾" to 3" diameter inclusive.

Write for prices and name of your nearest distributor.

SPS

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JENKINTOWN 35, PENNSYLVANIA

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HIGH SPEED COP WINDER
For
COTTON • JUTE
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(Exclusive For Paper Filling)

DISC & FINGER TENSIONS
SPINDLES • GEARS
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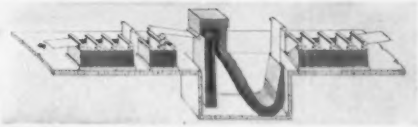
SEND US A SAMPLE OF YOUR YARN TO WIND
WRITE FOR CATALOG
AMBLER
TEXTILE MACHINERY CO.
Bodine & York Streets
PHILADELPHIA, PA.

BOOST BLEACHING OUTPUT and CUT COSTS

with these Du Pont Continuous Peroxide Bleaching Systems

ONE-STAGE OPEN-WIDTH SYSTEM
Capacity: Up to 1500 lbs. per hour



TWO-STAGE OPEN-WIDTH SYSTEM
Capacity: Up to 3000 lbs. per hour

IF YOU PLAN to modernize your bleachery, expand production, especially for speedy, economical handling of heavy fabrics, investigate the Du Pont Open-Width Systems. They are by far the most economical units of this type developed to date.

Introduced by Du Pont in 1943, they're specifically designed to handle heavy fabrics and tightly woven goods—heavy twills, drills, poplins, etc. They speed bleaching, cut costs in chemicals, steam and maintenance. Today, 16 of these systems, incorporating Du Pont principles, are operating in a number of leading mills.

Other types of Du Pont continuous systems, with capacities from 500 to 6,000 lbs./hr., are available. In fact, capacity of Du Pont designed installations operating or under construction is now over 75,000,000 yards per week—more than one-fourth the current annual U. S. production of cotton piece goods!

Let us tell you more about these cost-saving systems. We don't build or sell the equipment. But our Technical Service can help you select the right bleaching system for your requirements of production, type of fabrics to be bleached, utilities, and other economic factors. Bleaching specialists will help you survey your production facilities, make specific recommendations on equipment, give estimates and operating costs. After you decide on a system, Du Pont Technical Service representatives located in leading textile centers will help you start operation and train your technical and operating personnel. This service in no way obligates you.

For further information on Du Pont Continuous Peroxide Bleaching Systems, send the coupon below.

Tune in Du Pont "Cavalcade of America," Tuesday nights—NBC coast to coast

DU PONT
CONTINUOUS PEROXIDE BLEACHING

DU PONT
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BETTER THINGS FOR BETTER LIVING
...THROUGH CHEMISTRY

E. I. du Pont de Nemours & Co. (Inc.)
Electrochemicals Department, Wilmington 98, Del.

Please send me more information about Du Pont Continuous Peroxide Bleaching Systems.

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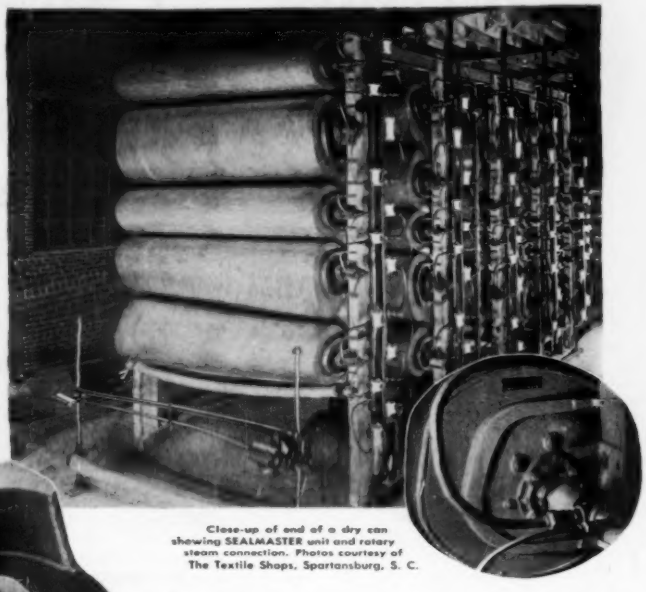
SEALMASTER

BALL BEARING UNITS *Top Performers* IN TEXTILE MACHINERY

Battery of 50 dry cans equipped with 100 SEALMASTER Flange-Cartridge Units plus a number of SEALMASTER Pillow Blocks. Equipment manufactured by The Textile Shops, Spartansburg, S. C.



SealMaster Pillow Block

Close-up of end of a dry can showing SEALMASTER unit and rotary steam connection. Photos courtesy of The Textile Shops, Spartansburg, S. C.

Combine All Essential Bearing Features in One Unit!

- **PERMANENTLY SEALED!**
- **PRE-LUBRICATED!**
- **SELF-ALIGNING!**
- **NO HOUSING WEAR!**

SEALMASTERS assure that textile machines will run smoother and quieter—*longer.* Maintenance needs are reduced to a minimum. Dust and lint are kept out *and lubricant in* by a positive, permanent, centrifugal sealing principle. Self-aligning SEALMASTERS are pre-lubricated for dependable, trouble-free bearing service. *Write for Catalog 845.*

Flange Cartridge Unit

The *Complete* SEALMASTER line includes pillow blocks . . . flanged units . . . take-up units . . . cartridge units and flange-cartridge units in a wide range of sizes.

BEARING DIVISION

STEPHEN S-A ADAMSON MFG. CO.

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Factory Representatives and Dealers in All Principal Cities

Keeping interiors cool and glare-free in this laundry building on Welfare Island, New York City, is easier with *Blue Ridge Frosted Aklo Glass. This building* was designed and constructed under the supervision of the Department of Public Works, City of New York.

Keep employes happier, more productive with

FILTERED DAYLIGHT

Here's a way to get more and *better* work from employes and earn their thanks for doing it. Give them lots of daylight—without annoying glare. Keep your building cooler and more comfortable in summer by excluding most of the sun's heat.

You do both when windows are glazed with Blue Ridge Frosted *Aklo*® Glass.

Make Seeing Easier

Frosted *Aklo* is like sunglasses in windows! This blue-green glass floods buildings with soft, cool, *comfortable* daylight by diffusing sharp rays of the sun. And when you glance at the windows, no sudden brightness hits your eyes. You don't need to buy shades—or paint the glass. Eyes don't tire. Better workmanship and fewer accidents are natural benefits.

Keep it Comfortable

Aklo Glass shuts out three times as much sun heat as ordinary glass. Helps keep interiors more comfortable on hot summer days. Reduces the load on air-conditioning, too.

So get this glass with the pleasant, restful blue-green color. See for yourself how Frosted *Aklo* Glass reduces glare and sun heat. Ask your Libbey-Owens-Ford Glass Distributor for a *Radiometer* demonstration. *Aklo* Glass is made by the Blue Ridge Glass Corporation of Kingsport, Tennessee, and is sold by L·O·F Glass Distributors. Mail the coupon for full information on *Aklo*. ®

Free Book on Reduction of Sun Glare and Heat

Blue Ridge Sales Div., Libbey-Owens-Ford Glass Co.
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Please send me a copy of your book on glare and heat reduction, "Filtered Daylight".

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Heat Absorbing • Glare Reducing • Figured and Wire Glass

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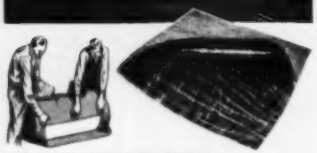
What's your packaging problem?



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ASSURES COMPLETE PROTECTION

You'll find FIBREEN the right answer for many protective packaging problems. FIBREEN saves time, labor and money . . . makes the lightest, most compact package . . . reduces shipping costs, conserves storage space, protects from dirt and moisture in transit and storage. For over 20 years FIBREEN has served the textile industries. Qualified consultants available to help you use FIBREEN to best advantage.

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London, England Sydney, Australia

Book Reviews

British Text On Filament Rayon

RAYON FABRIC CONSTRUCTION by A. T. C. Robinson; Thomas Skinner & Co. (Publishers) Ltd., 111 Broadway, New York 6, N. Y.; cloth, 180 pages, $5.

The first two chapters in this British book discuss some general properties of filament-rayon yarns and show how these properties must be kept in mind when one is planning the construction of a woven rayon fabric. The book then divides itself into two parts. The first deals with the construction of plain weaves, satins, and twills. The second part covers fancy and novelty fabrics, including the application of jacquard figuring to both simple and complex fabrics. Each chapter has both finished-fabric illustrations and black-and-white designs and peg plans. Fancy dress fabrics, brocades, and tapestries are analyzed in the two final chapters. Students of weaving and fabric designers will find the book a valuable reference.

Reference Manual Of Business Practices

BUSINESS EXECUTIVES HANDBOOK, Third Edition, Edited by Stanley M. Brown and Lillian Doris; Prentice-Hall, Inc., 70 Fifth Ave., New York; cloth, 1,600 pages, $7.50.

The business information contained in this copious handbook is specific and to the point. Everything in the factual line that a business organization would need for easy day-to-day running appears to have been included, whether the particular problem relates to amortization, credits, purchasing, selling, advertising, insurance, direct mail, or financial statements—to mention less than half of the general headings. The fifth printing of the third edition this spring brings the number of copies in print to over 150,000. Revisions in the third edition included changes in laws, rules, rates, and some statistics, as well as operating methods of some of the companies whose operations and services are described.

Fifty Years At Atlantic Steel

THE STORY OF DIXISTEEL by Charles F. Stone, assisted by Lee Fuhrman; Atlantic Steel Co., Atlanta, Ga.; cloth, 177 pages, no charge.

The history and growth of the present Atlantic Steel Co. during its first 50 years has just been published in connection with the company's golden-anniversary celebration this year. The beginnings of the firm at the turn of the century are described through the stories of the eight founding fathers in Atlanta. Photographs of individuals are included. The gradual building up of the business to its present capacity of over 200,000 net tons of steel is described through incident and description of product in the balance of the text.

Seminar Supplement Includes Discussions

SUPPLEMENT TO PAPERS, The Second Canadian Textile Seminar; Textile Technical Federation of Canada, Box 1000, Cornwall, Ontario, Canada; paper, 107 pages.

This supplement records the discussions that took place after the presentation of the technical papers at the textile seminar held at Queen's University, Kingston, Ont., last fall. It is being distributed to all who received the original book in which the full text of the papers was printed [TW, Jan., '51, p. 212]. In addition, four papers that were not received in time for inclusion in the original book are printed in full in this supplement: *Heat Treatment of Nylon Fabrics* by R. E. Fryer, *Characteristics of Crimp-Set Nylon Staple* by H. Garner, *Acid Dyeing of Wool* by P. Larose, and *Sequestering Agents in Wool Dyeing* by Henry E. Millson.

CMP Background Issued by NPA

PRODUCT ASSIGNMENT DIRECTORY and OFFICIAL CMP CLASS-B PRODUCT LIST by National Production Authority, U. S. Dept. of Commerce, Washington 25, D. C.; paper, 72 pages, no charge.

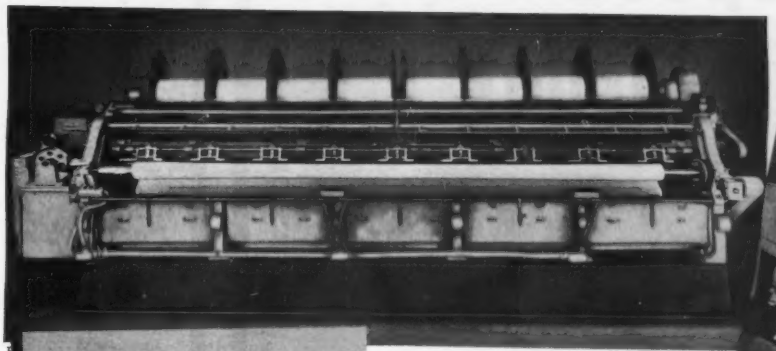
All economically significant U. S. products (except food, animal and vegetable oils, tobacco, and petroleum products) are listed in this publication for the benefit of those who wish to know (1) whether they have a CMP "A" or "B" product to worry about, (2) what their product code number is, and (3) what NPA division they are included under. The final 12 pages, reprinted as an appendix to the Directory, is the Class-B products listing, not alphabetical but by category groupings. Textile men will be interested in Product Class 35520 under NPA division GIEQ. The Controlled Materials Plan (CMP) goes into operation the first of next month.

Hits Inflation On the Head

YOUR SHRINKING DOLLAR and What You Can Do About It by Economic Research Dept., Chamber of Commerce of the United States, Washington 6, D. C.; paper, single copies free, $1 per hundred.

This little flyer sums up the facts about today's inflation in the United States in

You'll hit new production records with the Kidde-Aveco Tricot Machine!



Left end of machine showing enclosed gear box, pattern mechanism, motor and the controls.

Right end showing continuous let-down and take-up.

CHECK THESE FEATURES:

New Continuous Let-Down
Easy to set and maintain because it's mechanical. Eliminates shade marks, reduces stop marks and improves fabric quality.

New Variable Speed Drive
A turn of a hand wheel varies machine speed. No chain drive . . . no gears to be changed . . . quieter operation. Tachometer included.

New Continuous Take-up
Quality is established by a simple turn of adjustment screw. No gears or sprockets to be changed. No clutch. Once set, it requires no adjustment.

Other Features
These include improved plunger design, improved front guide bar lifting mechanism, quick-stop and jogging control.

NEW KIDDE-AVECO IS A HIGH POUNDAGE PRODUCER

The new Kidde-Aveco Tricot combines the essentials for large production . . . high operating speed with high efficiency. Speeds up to 450 courses, depending upon the pattern and yarn, are practical and are being maintained in mills today.

Equally important, the Kidde-Aveco Machine has acquired a reputation for low needle breakage. The press action is gentle and the needle life is better than usual. This means fewer defects and less down time. Other factors contributing to efficiency are enclosed cams running in oil . . . a one-piece cast girder that maintains machine alignment . . . and the rugged one-piece base . . . all exclusive Kidde-Aveco features.

Either to replace old machines or to increase capacity, the Kidde-Aveco is worth investigating. May we send you complete information?

KIDDE MANUFACTURING CO., INC., BLOOMFIELD, NEW JERSEY

Kidde-Aveco

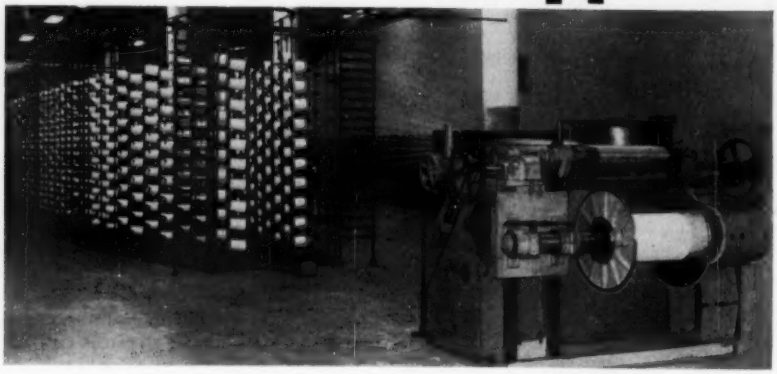
FOR TOP-QUALITY FABRICS

The Cocker High Speed Tricot Warper

This illustration shows a Cocker High Speed Tricot Warper for handling beams 21″ x 21″ . . . with Magazine Cone Creel and Electric Eyeboard Stop Motion. This machine can also be built to handle beams 42″ between flanges, with 21″ diameter flanges.

This Warper is of extra heavy construction with simple and efficient beam doffing, variable speed D.C. drive, presser roll located back of the beam . . . out of the way of the operator.

Write or wire for full information on the many other advantages of this Cocker High Speed Tricot Warper.



THE LEADER
COCKER
AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE WARP PREPARATORY EQUIPMENT

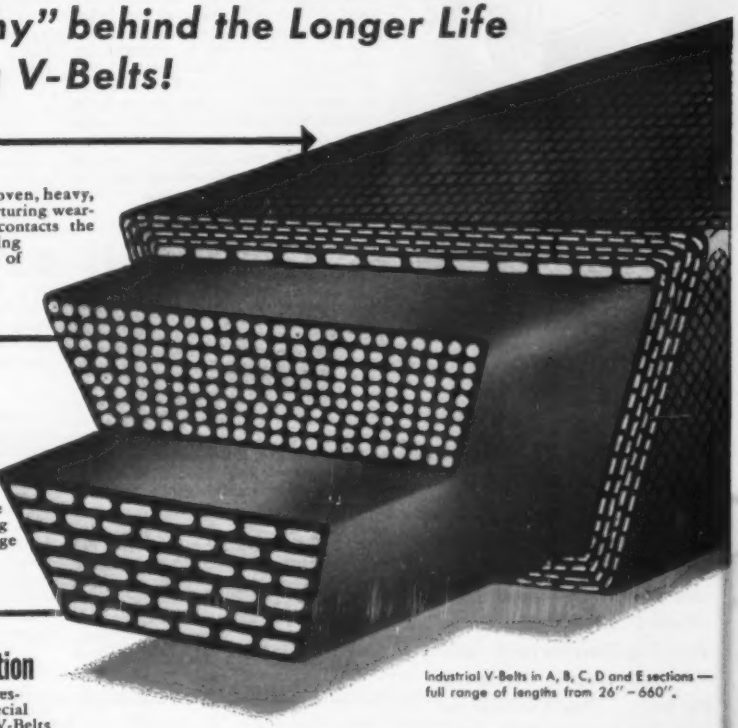
Look at All Three

for the "Why" behind the Longer Life of Bull Dog V-Belts!

1 **Cover** — closely woven, heavy, bias-cut fabric can take the torturing wearing action where the belt contacts the sheave at the same time sealing the belt against the entrance of grease, dirt and moisture.

2 **Cords** — Specially Engineered BWH cord section has high tensile strength giving superior load carrying capacity and ability to absorb shock loads. The minimum stretch derived from the exclusive technique used in processing Bull Dog Cords results in less slippage and fewer adjustments.

3 **Compression Section** — a BWH-developed compression section of fabric and special compounds permits Bull Dog V-Belts to run cooler and prevents their cracking or deteriorating under severe flexing.



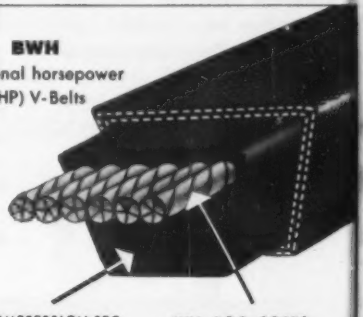
Industrial V-Belts in A, B, C, D and E sections — full range of lengths from 26" – 660".

To get the most work and longest life per dollar expended out of power transmission belting, all three factors — cover, compounds and cords have to be RIGHT . . . and Bull Dog V-Belts qualify high on all three counts!

Whether your concern is primarily with production, maintenance or purchasing, you will find there is no better investment in V-Belts than Bull Dogs! They pay off in longer life and lower maintenance costs.

TOUGH PROBLEMS INVITED — Don't hesitate to ask us or your nearest BWH distributor about your power transmission belting, conveyor belting and hose problems. We're specialists in making mechanical rubber products work *better, longer.*

BWH
Fractional horsepower (FHP) V-Belts



COMPRESSION SECTION engineered to withstand continual flexing.

BULL DOG CORDS, comprise a powerful, load-carrying section.

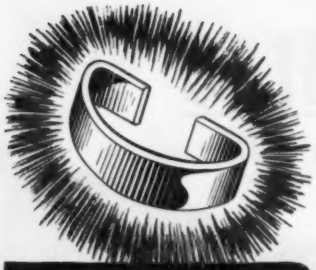
BWH
DEPENDABLE RUGGEDNESS

Another Quality Product of

BOSTON WOVEN HOSE & RUBBER COMPANY

Distributors in all Principal Cities

PLANT: CAMBRIDGE, MASS. • P. O. BOX 1071, BOSTON 3, MASS., U. S. A.



DARY
Ring Travelers

THRIVE
on
Responsibility

When the spinning and twisting load is the heaviest, when quality and quantity are wanted in big volume . . . that's when famous Dary Ring Travelers really shine! Put these superior travelers to the test . . . You'll discover the more you depend on them, the better they seem to click! Call in a friendly Dary representative tomorrow!

as clear and easy-to-understand language as has been put out by anyone. Mill men anxious to do something positive in the way of enlightening all levels of employees might consider including a copy of *Your Shrinking Dollar* in each weekly and monthly pay envelope. In wondering about the fall in the value of the dollar, the flyer authors, after painting percentagewise the seriousness of the situation, list three general causes. Each cause has several subheads under it. As for remedies to be applied before it is too late, six major governmental actions are recommended strongly, with details on "why" listed under each. In conclusion, five ways are listed in which individuals can do their part in help licking the menace.

Case-History Studies Of Materials Handling

MATERIALS HANDLING CASE BOOK, Edited by L. K. Urquhart and C. W. Boyce; McGraw-Hill Book Co., 330 West 42nd St., New York 18; cloth, 440 pages, $8.

Anyone whose job involves the storing or moving of materials in, through, or about a plant or warehouse will find this book a valuable source of materials-handling ideas. A total of 190 actual approaches to materials-handling problems used successfully by 145 industrial concerns are described and copiously illustrated. Each case study is indexed by the kind of equipment used, kind of product handled, and the company name. Problems licked by materials-handling equipment include receiving, shipping, machine lines, production, finishing, assembling, packaging, storing, and out-in-the-yard bottlenecks.

Useful Accessories for Textile Mills

▶ To request further information on any item, please use the card in the Reader-Service dept.; refer to the number at the end of the item concerned.

Maintenance

Emergency Hand Lamp

An automatic, emergency hand lamp that plugs into any 110-v. a.c. wall outlet and furnishes instant lighting when the regular source of current fails has been announced by Electric Cord Co., 195 William St., New York 38, N. Y. An adjustable, 21 C.P., flood-type head is designed to fit a Burgess 7.5-v. battery or its equivalent. The emergency light can also be a manually operated hand lamp. (U-1)

Floor-Repair Compound

Designed to meet excessive water conditions, oils, greases, and acids—all active disintegrators of ordinary concrete—Stonhard Stonpach topping has been announced by Stonhard Co., 1306 Spring Garden St., Philadelphia 23, Pa. The topping was developed for patching or completely resurfacing floors that have been subjected to severe conditions. Patches or overlays can be installed at a thickness as little as ¼ in. The flooring material is ready for application. After it is mixed with sufficient water to form a workable mortar, the topping hardens in 24 hr. (U-2)

High-Temperature Seal

A new seal, called the type-9 mechanical shaft seal and designed to perform effectively under severe temperature and corrosive conditions, has been announced by Crane Packing Co., Dept. R-25, 1800 Cuyler Ave., Chicago 13, Ill. The seal uses a flexible ring molded from the plastic material Teflon, which replaces the leather or the synthetic-rubber member used in most flexible mechanical seals. The type-9 seal is for centrifugal pumps, turbines, positive-displacement pumps, and agitators. It can be employed at temperatures up to 500° F. (U-3)

Moistureproofing Wax

A new synthetic wax for moistureproofing has been developed by Glyco Products Co., Inc., 26 Court St., Brooklyn 2, N. Y. Wax S-1167 is said to give an effective moisture barrier that protects electrical components, such as coils, from short circuits. Coils impregnated with Wax S-1167 by a pressure-vaccum system are reported to have resisted shorting for a minimum of 30 cycles after being steeped in water containing a powerful detergent. The wax is said to be tough and nonbrittle at low temperatures. (U-4)

Supports for Piping

Two new units for supporting plant piping have been announced by Bergen Genspring Corp., 15 Park Row, New York 7, N. Y. The Non-Resonant variable-spring support, which uses a snubber spring, is designed to prevent the load spring from going into resonance with the pipe. The Non-Resonant Sway Brace is designed to prevent building-up of large amplitudes of movement by means of two sets of cast-iron brakes that prevent vibrational hysteresis. (U-5)

Engineering

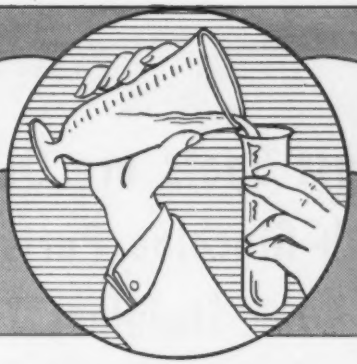
Electric Water Conditioner

An electric scale control, designed to reduce and prevent hard-scale formation in boilers and other equipment, has been announced by Electric Scale Control, Inc., 2028 East 22nd St., Cleveland 15, Ohio. The Aqua electric scale control passes water through an electrical field of the proper intensity. Colloidal particles and dissolved salts act as a conducting medium and pick up an electrical charge. The particles in the water are thus no longer attracted to tubes and other metal surfaces with which they come in contact. (U-7)

Electronic Function Plotter

An instrument for the automatic compiling of two measurements and the plotting

Tested!



Controlled

Prove the Value of these

Brytex PRODUCTS

in Your Own Plant—at Our Expense!

BRYTEX 745 GUM

A printing thickener that produces the greatest possible color value and efficient working qualities at low cost.

BRYTEX LUBRENE

A warp sizing softener and lubricant for rayon, acetate, staple and cotton fibres. A concentrated, efficient and versatile material that does the job thoroughly — and economically, too.

Write for Free Trial Sample of Any Brytex Product

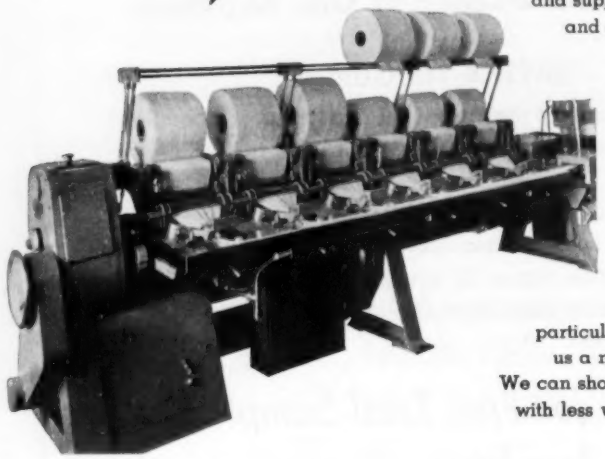
ASK FOR BOOKLET NO. 7

BRYANT CHEMICAL CORPORATION

NORTH QUINCY 71, MASSACHUSETTS

BOX 2301, SPARTANBURG SOUTH CAROLINA

Rust Spots are OUT with Machine Parts of *Carpenter* Stainless Tubing



Talk about very little maintenance! You just wipe these smooth Stainless storage racks and supports with a rag and they stay clean and gleaming. No chance for rust to ruin fibres or fabric.

And the strength of Carpenter Stainless Tubing keeps machines like this on the job. No unnecessary down-time for repairs to parts like storage racks, rolls or rods.

For more information about Carpenter Stainless Tubing made particularly for textile roll and rod use, drop us a note and tell us about your problems. We can show you cases of increased production with less waste as a result of using Carpenter Stainless Tubing.

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, N. J.
Export Department: Reading, Pa. "CARSTEELCO"

Carpenter
STAINLESS TUBING

—guaranteed on every shipment

Distributors in principal cities are qualified to help you get better processing results with Carpenter Stainless Tubing. See your classified telephone directory.

A RELIABLE SUPPLIER!

A Reliable Product?

How could a good, reliable manufacturer produce anything *but* a reliable product?

Here's how! *BY LETTING INDUSTRY GET AHEAD OF HIM!* For instance, during recent years you've made many changes and improvements in your mill. Power transmission methods have changed, too. Has your supplier of flat leather belting improved his product to meet your new and increasingly heavier demands? *Is his belting better today than it was even a few years ago?*

Here's the Southern Belting answer:

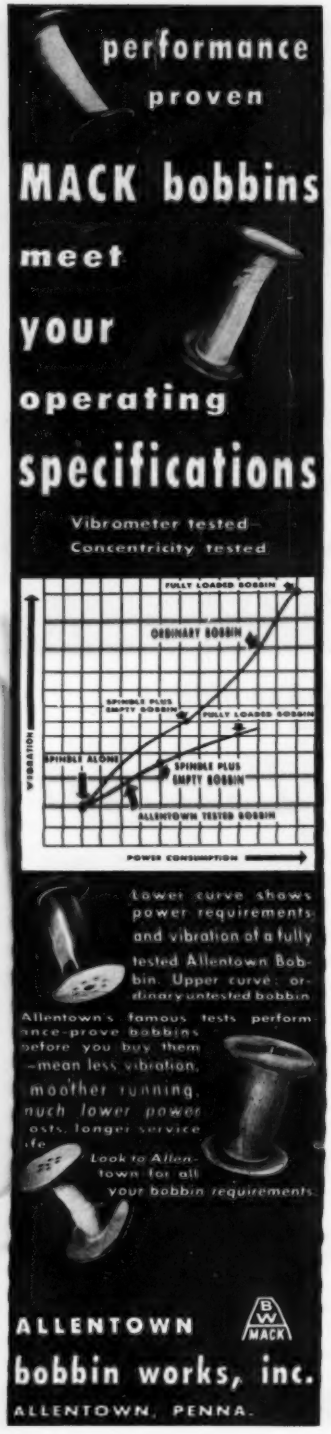
"Southern" belting is *unconditionally guaranteed* to equal the most rigid performance specifications in existence. Performance beyond requirements of industry.

BUY A RELIABLE PRODUCT FROM A RELIABLE SUPPLIER.
BUY "SOUTHERN" BELTING.

SOUTHERN *Belting* COMPANY

236 FORSYTH STREET, S. W. ATLANTA 2, GEORGIA

THE "SOUTHERN WAY" IS THE MODERN WAY



of a curve to show their interrelationship has been developed by Minneapolis-Honeywell Regulator Co., Brown Instruments Div., Wayne & Windrim Aves., Philadelphia 44, Pa. The Brown ElectoniK function plotter is said by the company's engineers to incorporate two measuring systems, one of which actuates the recorder pen while the other motivates the instrument chart. The result of the two motions is a curve that is said to evaluate continuously one variable in terms of the other. (U-8)

Flared Tube Fitting

A single new-style brass flared tube fitting has been announced by Parker Appliance Co., 17,325 Euclid Ave., Cleveland 12, Ohio. The new fitting is said to replace four previous brass fitting types. The fitting is a brass counterpart of the Parker Triple-lok, J.I.C., standard steel fitting. With a 37° flare angle, dry-seal pipe threads, and a three-piece design, the Triple-lok brass fitting replaces both the Parker two-piece and the Parker three-piece fittings in both single and XX weights. (U-9)

Fluid-Flow Transmitter

A compact, lightweight transmitter designed for more sensitive measurement and control of fluid flows in many industrial processes has been developed by Minneapolis-Honeywell Regulator Co., Brown Instruments Div., Wayne & Windrim Aves., Philadelphia 44, Pa. The new Differential Converter has a continuously adjustable range from 0 to 20 to 0 to 200 in. of water (differential pressure) and provides this 10-to-1 change of range with no change of parts. The differential pressure caused by fluid flow is balanced by pneumatic pressure that becomes a measure of the fluid flow and is connected to a recording or controlling instrument. (U-10)

Improved Transformer

A number of improvements in the CSP transformer have been announced by Westinghouse Electric Corp., 306 Fourth Ave., Pittsburgh 30, Pa. The improvements, now incorporated in all ratings, make the transformres simpler, smaller, and easier to ship and service. Improvements listed by the manufacturer are: reduction in the number of doors and padlocks, elimination of the rear auxiliary compartment, more convenient fuse-changing, a new welded position of the arrester bracket, inside-built braces, reduced floor-space requirement, elimination of internal network potential transformers, and elimination of ventilators from wall panels. (U-11)

Limestone Eliminator

A process for the elimination of lime-stone-crust formations in boilers and pipes has been developed by Velan Engineering Co., 1 Exchange Place, Jersey City, N. J. This positive-action device is said to achieve results with a simple mechanism. Ultrasonic wave impulses are transmitted to the liquids being treated. The process is continuous, and crystallized lime particles fall to the bottom of the container, where they are easily removed. Crustex apparatus is said to be simple and easy to install and to require no attention in operation. (U-12)

Low-Cost Smoke Alarm

A new smoke alarm, designed to give instant warning of unregulated smoke, has been developed by General Power Plant Corp., 381 Fourth Ave., New York 16, N. Y. Smoke violations and complaints are said to be eliminated because the operator is immediately warned of any smoky condition. An alarm bell continues to ring until necessary corrective adjustments bring smoke density within legal limits. The new GP model-A includes an indicating smoke alarm and a smoke-density recorder. (U-13)

New Servo-Amplifier

A new servo amplifier has been developed by Industrial Control Co., 1482 Undercliff Ave., New York 52, N. Y. The 410-B model is a 60-cycle amplifier designed to drive a motor with 5-w. output. The range of adjustment features controls on the gain carrier phase shift, and damping. Adjustments are independent. The 410-B is designed to be used in all servo loops in this power class. The range of adjustment is designed to make it a stock item with universal application. (U-14)

Power-Valve Actuators

A new line of valve actuators designed for the operation of gate valves, plug valves, dampers, diaphragm valves, and sluice gates has been developed by Ledeen Mfg. Co., 1602 So. San Pedro St., Los Angeles 15, Calif. The valve actuators are equipped with brackets, valves, controls, and couplings to make them suitable for almost any type of operation. They can be adopted to any make, size, and type of valve to operate against any line pressure, for any fluid medium, and with any pressure that may be available. On-and-off service or positioning service can be provided. (U-15)

Rotary Roof-Cooler

An economical way to keep a building cool has been developed by Siegfried Ruppright, P. O. Box 6795, Los Angeles 22, Cal. Ruppright's Rotary Roof-Cooler is said to do the job with a thin film of water that is continuously renewed by the slowly revolving cooler as the old water film evaporates. The cooling effect is uninterrupted, and thus the roof is cooler than the air itself at all times. The amount of roof area covered by one cooler depends on the available water pressure. (U-16)

Switch-Operation Mechanism

A new operating mechanism for switches and circuit breakers has been announced by Square D Co., 4041 N. Richards St., Milwaukee 12, Wis. The operating mechanism is designed for convenient mounting and permits the disconnect to be mounted directly on the panel without posts or brackets. Interlocks and padlocking arrangements assure operator safety. With the handle locked, the door cannot be opened. An interlock also prevents opening of the door when the switch or breaker is on. (U-17)

PRODUCTION PROBLEMS

got you up a tree?

● The function of our Technical Service Department is to help solve various production problems in the field. These men are constantly working with new products and techniques—perhaps this experience would be helpful in smoothing out production sore spots in your operation.

Our basic, continuing research in starch chemistry is unsurpassed . . . under the direction of the foremost research men in this field.

Make the most of these facilities . . . no obligation, of course.

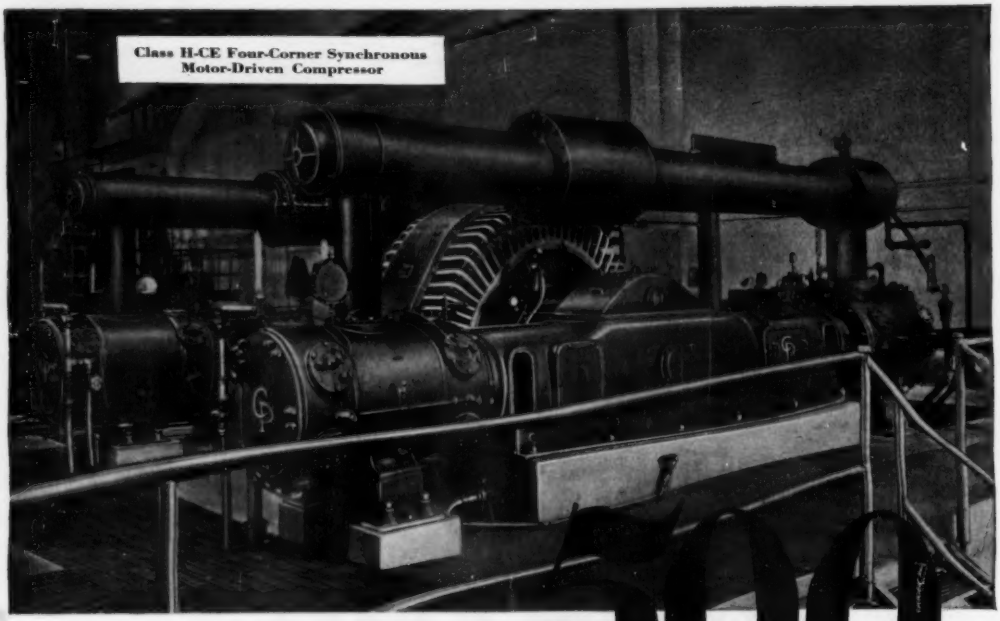
For uniform quality products . . . for a reliable source of supply . . . depend on Corn Products Refining Company.

Globe and Eagle are registered trade-marks of Corn Products Refining Company, New York, N. Y.

write to

CORN PRODUCTS REFINING CO.

17 Battery Place, New York 4, N. Y.



Class H-CE Four-Corner Synchronous Motor-Driven Compressor

Duplex synchronous motor-driven Compressors in sizes from **300**

to 12,000 c.f.m.

piston displacement at 100 lbs. pressure

These compressors have anti-friction roller bearings throughout: spherical roller main and crankpin bearings, and heavy-duty needle bearings at the crosshead pins.

The use of roller bearings in the running gear eliminates all danger of misadjustment in maintenance. Roller crankpin bearings permit the use of solid-end connecting rods, the strongest and safest type.

a complete line

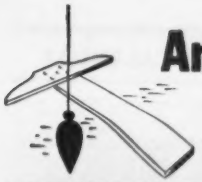
CP Compressors range from 7½ to 2000 h.p. in electric and steam-driven types, pressures to 5000 lbs.; vertical and horizontal models; CP Vacuum Pumps from 7½ to 1000 h.p.

Write for Bulletin 726

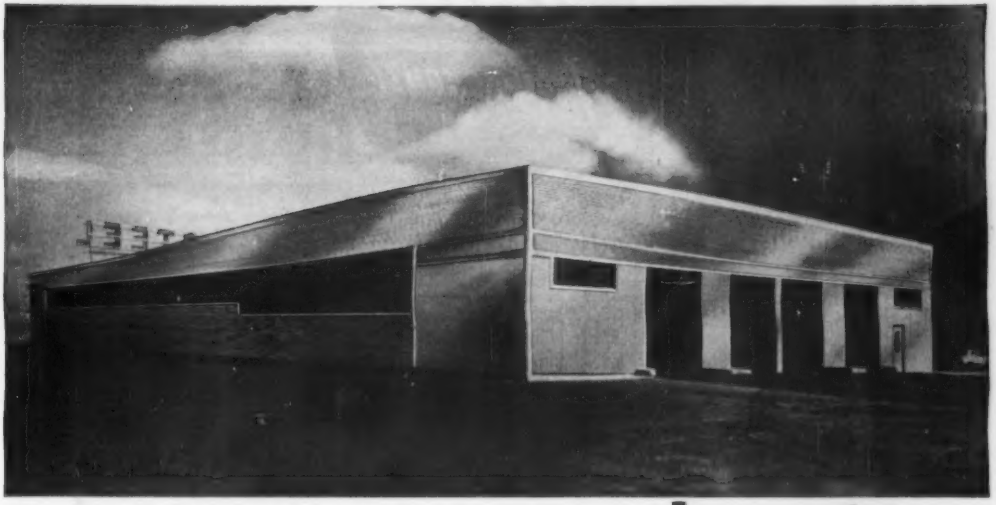
CHICAGO PNEUMATIC TOOL COMPANY

General Offices: 8 East 44th Street, New York 17, N. Y.

PNEUMATIC TOOLS • AIR COMPRESSORS • ELECTRIC TOOLS • DIESEL ENGINES
ROCK DRILLS • HYDRAULIC TOOLS • VACUUM PUMPS • AVIATION ACCESSORIES



Architect-Engineer's choice for Beauty, Long Life, Low Maintenance



New warehouse—Ward Steel Co., North Cambridge, Mass.

When the Ward Steel Company of North Cambridge, Mass., undertook to build the most modern steel warehouse in New England,

they called on Waghorne-Brown as designers and engineers.

Waghorne-Brown specified rustproof, corrosion-resistant Reynolds *Lifetime* Aluminum Industrial Corrugated for siding. Their reasons were: appearance, long life, low initial cost and low maintenance (no painting)... plus great strength combined with light weight that saves money on framing (see specifications).

Aluminum's radiant heat reflectivity was another deciding factor.

On walls or roof, it reduces inside summer temperatures and cuts winter fuel bills. An interesting detail in this building is the contrasting horizontal and vertical application, with aluminum corners and edging. For technical assistance and application details, call any Reynolds Office. Literature on request.

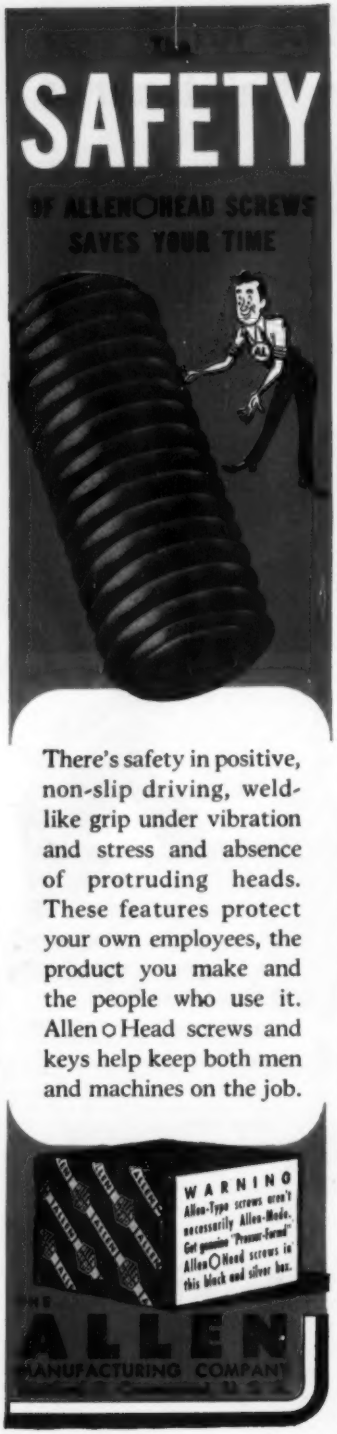
• Offices in principal cities... check your classified phone book for our Building Products listing, or write Reynolds Metals Company, Building Products Division, 2005 South Ninth St., Louisville 1, Ky.

Aluminum is required for planes and other military needs. Reynolds *Lifetime* Aluminum Industrial Corrugated is still produced, but the total supply is necessarily reduced. DO-rated orders receive priority handling.

Specifications for Reynolds *Lifetime* Aluminum Industrial Corrugated:

Thickness .032"
Corrugations 7/8" deep, 2-2/3" crown to crown
Uniform load support (roof) 80 p.s.f. on 4' purlin spacing
Uniform wind load capacity (siding) 20 p.s.f. on girt spacings up to 7'6"
Roofing width 35", coverage 32"
Siding width 33-3/4", coverage 32"
Lengths 5', 6', 7', 8', 9', 10', 11', 12'

REYNOLDS *Lifetime* ALUMINUM INDUSTRIAL CORRUGATED


SAFETY
OF ALLEN HEAD SCREWS
SAVES YOUR TIME
There's safety in positive, non-slip driving, weld-like grip under vibration and stress and absence of protruding heads. These features protect your own employees, the product you make and the people who use it. Allen Head screws and keys help keep both men and machines on the job.
WARNING
Allen-Type screws aren't necessarily Allen-Made.
Get genuine "Pressur-Formed" Allen Head screws in this black and silver box.
THE ALLEN MANUFACTURING COMPANY

News of the month

Non-Burning Orlon. Orlon fabric can be heat-treated in a certain way so that the basic chemical of the fiber is changed to a flameproof compound that will not burn under flame temperatures running as high as 1,400° F. This development was shown for the first time to the general public by the Pioneering Research Laboratories of E. I. du Pont de Nemours & Co., Inc., at its recent expanded Experimental Station opening. No flame-resistant chemicals are added to the fabric in finishing, as the heat treatment itself is sufficient. The altered Orlon fabric has approximately the tensile strength of wool. The only color made so far is black, which is the color resulting from the heat treatment.

Whitin Pilot Plant. A new pilot plant that took a year and a half to set up, at an expenditure of about half a million dollars, was dedicated recently by Whitin Machine Works, Whitinsville, Mass. With the four-story laboratory completed in what was originally one of the machinery firm's early buildings, research engineering at Whitin will be consolidated in one spot. By means of the more than 50 machines in place, usable in any sequence, company and other research people will be able to evaluate specific yarns or blends under controlled conditions and to obtain a permanent detailed laboratory analysis of the product as it progresses from raw stock to yarn. A permanent exhibit of latest models of Whitin machines has been installed on the first two floors of the building. The new facilities are under the supervision of Deane A. Cabot, chief research engineer. About 70 people are to be employed in the new research unit.

Immature-Cotton Characteristics. Immature cotton fibers are more elastic than mature ones, Dr. H. R. Wakeman, Textile Research Institute, Princeton, N. J., told the recent Fiber Society meeting in Atlanta, Ga. Immature fibers exhibit lower slopes and higher elongations to yield and to rupture than more mature fibers. The yield stresses are about the same for all groups of fibers, while the breaking stresses for the mature fibers are higher than those of the immature fibers. All the cotton fiber groups examined so far have the same average yield-stress value of 0.6 grams per denier. Ordinary viscose rayon has the same yield-stress value.

New SRRL Loom Attachment. A new loom attachment developed by Southern Regional Research Laboratory, New Orleans, La., enables cotton fabric to be so closely woven that water cannot penetrate the untreated ma-

TEXTILE CALENDAR

Canadian International Trade Fair, Toronto, Ontario, May 28 to June 8, 1951.

AATCC, Philadelphia Sect., annual outing, Torresdale-Frankford Country Club, Philadelphia, Pa., June 1, 1951.

LTI Alumni Reunion, Lowell Textile Institute, Lowell, Mass., June 2, 1951.

Chattanooga Yarn Assn., annual party and golf, Lookout Mountain Hotel, Chattanooga, Tenn., June 7 and 8, 1951.

AATC, Southeastern Sect., summer outing, Radium Springs, Ga., June 8 and 9, 1951.

Reworked Fiber Course, Wool Dept., Lowell Textile Institute, Lowell, Mass., June 11 to 15, 1951.

Seattle International Japanese Trade Fair, Edmundson Pavilion, Seattle, Wash., June 17 to July 3, 1951.

ASTM, annual meeting, Atlantic City, N. J., June 18 to 22, 1951.

Gordon Research Conference on Textiles, Colby Junior College, New London, N. H., June 18 to Aug. 31, 1951.

STA, annual convention, Mayview Manor, Blowing Rock, N. C., June 21 to 23, 1951.

Chicago Yarn Men's Club, golf outing, Elmhurst Country Club, Chicago, Ill., June 28, 1951.

Principles of Textile Research, summer course, Mass. Institute of Technology, Cambridge, Mass., July 2 to 27, 1951.

Summer Refresher Course, Teachers College of Columbia Univ. and U. S. Testing Co., Hoboken, N. J., July 23 to Aug. 10, 1951.

American Chemical Society, diamond jubilee, New York, Sept. 3 to 7, 1951.

Fiber Society, fall meeting, Swampscott, Mass., Sept. 13 and 14, 1951.

AATCC, annual convention, Statler Hotel, New York, Oct. 17 to 19, 1951.

Packaging Institute, annual forum, Hotel Commodore, New York, Oct. 22 to 24, 1951.

1952

Plant Maintenance Show, Convention Hall, Philadelphia, Pa., Jan. 16 to 19, 1952.

Fiber Society, spring meeting, Clemson House, Clemson, S. C., April 16 and 17, 1952.

Knitting & Allied Crafts Exposition, sponsored by Natl. Knitted Outerwear Assn. and Underwear Institute, Grand Central Palace, New York, April 21 to 25, 1952.

American Cotton Mfrs. Institute, annual convention, Haddon Hall, Atlantic City, N. J., May 15 to 17, 1952.

1954

American Textile Machinery Exhibition, sponsored by National Association of Textile Machinery Manufacturers, Atlantic City Auditorium, Atlantic City, N. J., April 26 to May 1, 1954.

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Ivan is afraid of only one thing.

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THE STRONGER WE GROW

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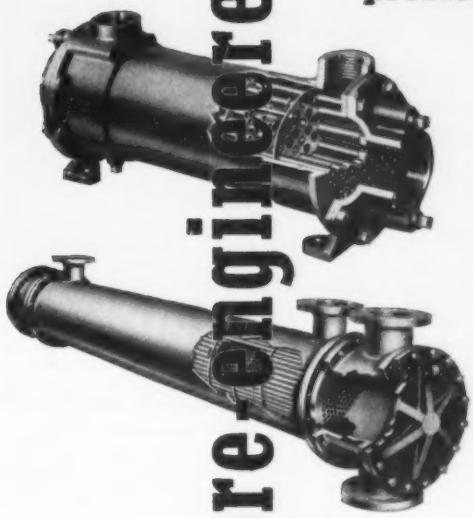
simplifying many heat exchanger problems in textile operations



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The fact that Ross stocks fully standardized, mass-produced components and sub-assemblies for quick assembly into pre-engineered, standard designs, has contributed materially to simplification and cost-reduction of heat exchanger requirements in the textile field.

In practically every phase of textile operations, the benefits apply – dye liquor heating, preheating for bleaching, heat removal in mercerizing, solution cooling in dry cleaning and washing, oil cooling in hydraulic printing machines, lube oil and jacket water cooling in Diesels, heat recovery from waste process water in dyeing, mercerizing, bleaching, kier boiling, scouring and washing, to name a few.

And the direct advantages of the Ross pre-engineered technique accrue to both mill and machinery manufacturer alike: engineering time for each application is considerably reduced; delays in deliveries are avoided; replacement parts for any eventualities are always readily available; costly, specialized fabrication is eliminated.

A Ross heat exchanger engineer in your locality will consider your problems with you or your consulting engineers without obligation, at your request. Literature describing the Ross line will be dispatched promptly. Write.

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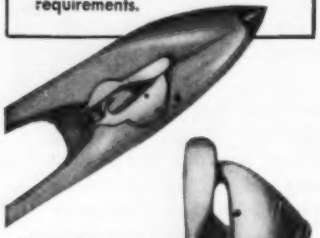
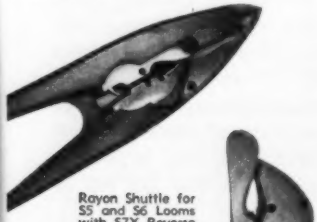
Keep ahead of your shuttle needs

Give ample protection to your weaving standards, which the Shuttle People help you to maintain, by purchasing your shuttles well ahead of time. Be on the safe side, and certain of those Watson Williams shuttle features on which you particularly depend. Allow at least an extra month for us to meet your exact requirements.



Woolen Shuttle with a W1SL Rear Tension Eye, interchangeable with other famous Watson Williams regular and tension eyes.

W1SL Rear Tension Eye maintains an even tension at all times on filling. Prevents many troublesome weaving imperfections.



Rayon Shuttle for S5 and S6 Looms with S7X Reverse Wind Eye.

S7X Reverse Wind Center Tension Eye eliminates many rayon filling problems, by holding the thread in perfect alignment and constantly down in place.

WATSON-WILLIAMS Mfg. Co.

MILLBURY, MASSACHUSETTS

SOUTHERN REPRESENTATIVES: Watson and Desmond, Box 1954, Charlotte, N. C.; Arthur J. Bahan, 810 Woodside Bldg., Greensville, S. C.; John Wyatt, Jefferson Bldg., Greensboro, N. C.

NORTHERN REPRESENTATIVE: Guy C. Burbank, 32 Beaconsfield Rd., Worcester 2, Mass.

NEWS OF THE MONTH [Continued]

terial. The cloth contains about 30% more filling that ordinary tarpaulin fabric, yet weighs one-third less. The attachment permits the weaving of lighter-weight yarns in very dense construction apparently without attendant mechanical difficulties.

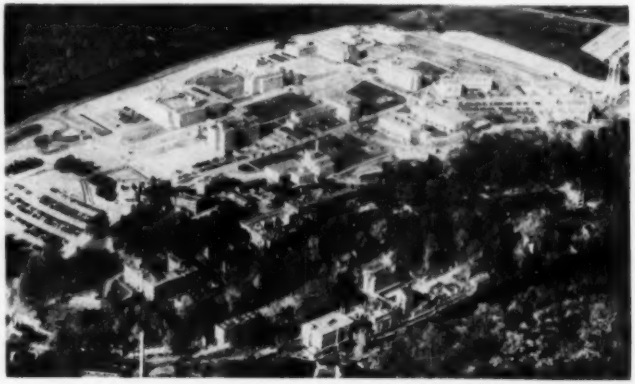
Isothermal Chamber. Among the new developments unveiled at the recent dedication of the enlarged Experimental Station of the Du Pont Co. in Wilmington, Del., was an instrument called an isothermal chamber. This device measures scientifically the various factors that go into "comfort" in apparel fabrics. The thermal resistance of fabrics is measu.ed by determination of radiation, convection, and conduction losses through various apparel cloths. Losses are measured by a thermocouple. Both dry and wet heat losses are evaluable. When the device has been proved more thoroughly, results are to be correlated with actual comfort tests on human beings wearing various types of apparel fabrics.

Feltability Studies. The effect on feltability of blending of other fibers with wool depends on the nature of the non-wool component as well as on the amount present, Dr. Herman Bogarty, Harris Research Laboratories, Washington, D. C., told the recent 10th anniversary meeting of the Fiber Society in Atlanta, Ga. The addition of nylon to felting wool serves to decrease the feltability of the blend, roughly in proportion to the amount present. The addition of viscose staples does not readily affect the felting properties of wool until over 50% of the blend is rayon, the speaker said.

Stepped Up Cotton Breeding. Seed from test lots of cotton harvested in Mexico in early spring was brought to the United States recently and planted here. In the fall, the U. S. crop will be harvested and the seed shipped back to Mexico for replanting. By continuing such a stepped-up breeding program, it is hoped that interspecific cross cottons and new triple-hybrids, as well as refinements of extra-long staples, will be made available commercially three or four years earlier than was originally anticipated. Favorable cotton characteristics sought include high tensile strength and luster.

Dacron Pilling Minimized. The Du Pont Co. is working hard on the overcoming of pilling in all-Dacron suitings, and believes its progress has been substantial in this direction, Dr. L. L. Larson of the sales-development section of the nylon division of the company told AATT members recently. The first commercial suiting fabric from Dacron was made about a year ago. Pilling since then has been minimized by a higher twist in the yarn, a tighter construction in the basic fabric, and by the use of sanding, shearing, and singeing in the finishing operation. Static problems arising in 100% Dacron fabrics are being minimized in tests with permanent antistatic agents.

Torquay Conference. The recent conference on tariff rates concluded at Torquay, England, in several instances



***NEW CONSTRUCTION** at the Du Pont Experimental Station at Wilmington, Del., includes nine new laboratory buildings and 11 new service buildings, as shown in the top, more open half of this aerial view of the Station. The $30,000,000 expansion program makes this over-all group of research laboratories one of the largest in American industry in one location.*

Announcing

The Improved

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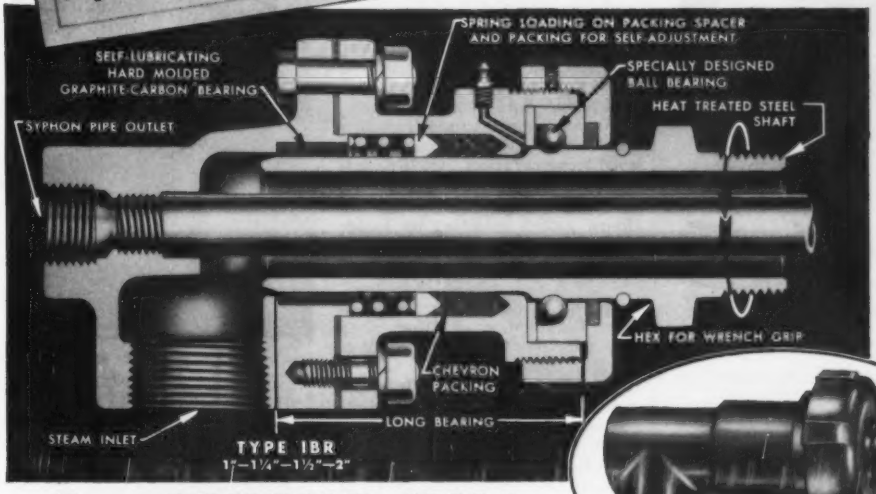

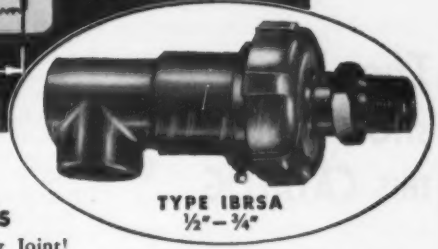

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HERE is the new *improved* Type IBR Barco Revolving Joint! Precision-built and field-tested, it has met with enthusiastic approval by machinery designers and operating engineers, alike. Here are some of the reasons why:

LOW TORQUE CUTS POWER COSTS! Wide spacing between bearings holds bearing loads to a low limit and maintains close alignment. Specially designed ball bearing carries both radial and end thrust. Inherent low torque is little affected by pressure, speed, or temperature. Up to 50% power savings.

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EASY SERVICING, LOW MAINTENANCE! Light running action minimizes wear, permits free-floating installation. No adjusting necessary. Internal parts are readily accessible—usually without removing joint from roll.

For the complete story, send today for new Bulletin No. 300 "BARCO REVOLVING JOINTS." Barco Engineers are at your service; ask for recommendations. BARCO MANUFACTURING CO., 1806 G Winnemac Avenue, Chicago 40, Illinois. In Canada: The Holden Co., Ltd.

Syphon Style—TYPE IBR. Built for 450°F., steam service to 150 psi, and up to 500 RPM. Hydraulic service to 200 psi, 750 RPM. Higher pressure and speeds under certain conditions.

Single Flow Style—TYPE IBRSA. Similar to Type IBR. Sizes 1" and larger have 2-piece flange connected body.

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TYPE R and RS — Double row ball bearing construction. Maximum pressure 250 psi (steam) or 500 psi (hydraulic). Syphon and single flow styles.

TYPE V— Small size, light duty, for speeds up to 2500 RPM.

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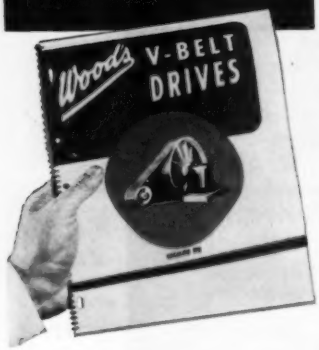

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NEWS OF THE MONTH (Continued)

lowered the hurdle that foreign textile-machinery manufacturers must jump to get into the lucrative American market. In other instances, American machinery manufacturers will benefit from other countries' concessions to us and to each other, under the most-favored-nation clause. U. S. A. textile-machinery reductions include a change from 40 to 20% ad valorem on full-fashioned hosiery machines from West Germany and from 27½ to 20% on other types of German-made machinery and parts. Potential benefits to American manufacturers include a reduction to 10% on Canadian plywood for picker sticks, of a 30% duty reduction by Italy on wet-finishing machinery and industrial sewing machines, and a reduction by France from 18 to 15% ad valorem on certain finishing machines.

Carpet-Rayon Future. Within a few years, consumption of carpet rayon may range from a third to a half of the total consumption of all fibers in carpets, Frank E. Masland, Jr., chairman of the Carpet Institute, told the annual spring meeting of the group. Rayon consumption in 1950 was five times that of 1949. Wool costs have increased about 400% since 1947, and the cost of Argentine wool (today the chief source of carpet-wool supply) is up about 700% over 1947. Carpet manufacturers apparently are not using synthetics merely as a matter of expediency, for Mr. Masland stated that the only factor limiting consumption of carpet rayon today is available supply.

Quality-Control Group Organized. The Textile Quality Control Assn. was officially organized at a meeting of more than 85 technical men in Raleigh, N. C., earlier this spring. Officers elected were Clyde Moss, Firestone Textiles, Gastonia, N. C., chairman; F. H. Martin, Springs Cotton Mills, Lancaster, S. C., vice chairman; W. A. Thomason, TEXTILE WORLD, Charlotte, N. C., secretary; and George E. Archer, Uster Corp., Charlotte, N. C., treasurer. A constitution is being drawn up by a steering committee for consideration at the fall meeting. The group will deal mainly with quality control on a mill level. Members range from mill managers to lab technicians.

***EUROPE-BOUND EDITOR** P. M. Thomas of TEXTILE WORLD left Idlewild Airport, New York, early last month to visit the Lille Textile Exhibition and mills in France, Italy, Switzerland, and England. The chief editor was wished "bon voyage" by E. D. Fowle (left), TW publisher, and Dick Scott, New York editor. Mr. Thomas returns early this month.*

Wool Assn. Elects New VPs. Three new vice presidents were elected at the 86th annual meeting of the National Association of Wool Manufacturers. They are Minot K. Milliken of Deering, Milliken & Co., Abbot Stevens of J. P. Stevens & Co., and Elmer L. Ward of Goodall-Sanford, Inc. Arthur Besse was re-elected president, as were Franklin W. Hobbs and Lewis A. Hird as vice presidents and Walter Humphreys as sec.-treas.

NAHM Directors Elected. Three new members of the board were elected at the 47th annual meeting of the National Association of Hosiery Manufacturers in Atlantic City last month: W. E. Mitchell, vice president of Melrose Hosiery Mills; Frank R. Riesenberger, president of Van Raalte Co.; and Thomas Robson, president of Wayne Knitting Mills. The three men succeed Hugh M. Grey, T. H. Mueller, and Joseph L. Turbidy.

Mobilization News Items

Controlled Materials Plan. Beginning July 1, a NPA Controlled Materials Plan goes into effect. Under the plan, defense and defense-supporting production and construction will be programmed. Essential materials will be

HIGHER SPINDLE SPEED

WITHOUT VIBRATION

... Due to the EXTRA Rigidity

of RCK (BLACK) FLYERS

It's a fact. With RCK tempered flyers you can actually speed up your spindles by as much as 100 to 200 RPM, and not have to worry about the damaging vibration that you'd get from ordinary flyers.

Ideal's heat-tempering process—the same process that gives RCK (Black) flyers their glossy rust-resistance—also stiffens them, gives them stronger resistance against the "ballooning" effect which makes an ordinary flyer wobble at high speeds. This extra rigidity overcomes many of the ill effects of fluctuating spindle speeds, assures more uniform yarn quality.

This and other *improved methods* used exclusively by Ideal Machine Shops make RCK flyers the outstanding choice of production-wise, quality-conscious mill men from coast to coast.

- Flyer barrels drawn in .003" undersize with Ideal's pneumatic swaging machine, and taper-reamed to factory specifications. Legs and noses smoothed and straightened.
- Flyers balanced at the running speed *specified by your mill* with Ideal's SELECTO SPEED flyer balancing process.
- Flyers given your choice of the famous RCK finishes:
  - RCK Black—glossy, highly rust-resistant.
  - RCK Bright—highly polished, ideal for rayon or cotton.
  - REGULAR—all repairs, but no polishing.

IDEAL MACHINE SHOPS, INC.

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Ask us to lend you one of these instruments custom built to meet your individual requirements and calibrated over the range you specify from samples of your material—we guarantee precision to be as set forth in our quotations.

Note many forms of electrode, especially the clamp for rayon cakes.

WIDE APPLICATION

1—Bulk cotton—the meter will gauge this material with a precision not exceeded by carefully made oven tests
2—Finished fabrics
3—Loose fibers
4—Skeins
5—Rayon cakes which are gauged without removing the wrapper
6—Cones and spools
7—Bales

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made available based on the common denominators used in World War II—steel, copper, and aluminum. The plan seeks to guarantee that a balanced flow of materials is available on time and in sufficient quantity. Products programmed fall either into category "A", in which producers get their production authorization and material allotments from the customer; or into category "B", in which producers obtain their authorizations and allotments from their own NPA industry division.

Dropped From DO-97s. Certain scarce materials have been removed from the list of products for which mills have had to apply with a defense-order rating (DO-97) if they wished to obtain them as maintenance, repair, or operating supplies. These materials now on the free list—as given in a recent amendment to NPA Regulation 4—include chemicals, nylon fiber and yarn, packaging materials and containers, paper and paper products, paint, lacquer, varnish, photographic film, rails, track spikes, frogs, and switches.

QM Specification Book Reissued. "Summary of Specification Requirements for Quartermaster Textiles," consistently one of the most popular reports in the textile field, is now available in a 1951 revision. The report lists in tabular form military-specification requirements for cotton, woolen, synthetic, and blended fabrics. The book is available from the Government Printing Office in mimeograph form (PB 98573r) at $3.25 per copy.

CPR-37 Issued. A specially tailored order, CPR-37, that tells cotton mills how to price their sales yarns and fabrics will go into effect July 2. Over 1,200 mills, with a total of 500,000 employees, are reported affected by the regulation.

In general, Ceiling Price Regulation No. 37 is patterned after the recent April 25 General Manufacturers' Order (CPR-22). Like the manufacturers' regulation, the new order permits cotton mills to add increases in payroll and materials costs to pre-Korean prices in force during option base periods—either April 1 to June 24, 1950, or any one of the three previous calendar quarters.

For raw cotton and mill labor, increases from the base period to March 15, 1951, can be included under the new ceilings. The cut-off date for items like starches, dressings, soaps, and belting is Dec. 31, 1950.

The new regulation differs from CPR-22 in four ways that are important to mills.

1. It prescribes computation of costs on a unit basis—per pound of yarn, per yard of fabric—instead of for all units of a product or product line.

2. It sets as the base-period raw-cotton price the cents-per-pound prevailing on the day of the highest-priced base-period sale to someone in the "largest customer" class. CPR-22 says mills will take a weighted average of costs during the last 30 days of the base period.

3. It permits the use of the contract, or list, price offered during the base period—instead of the delivered price—as the base price.

4. Mills can sell at new ceiling prices as soon as they file cost-data forms with OPS. Manufacturers covered by CPR-22 have to wait 15 days in cases where that order permits a price increase.

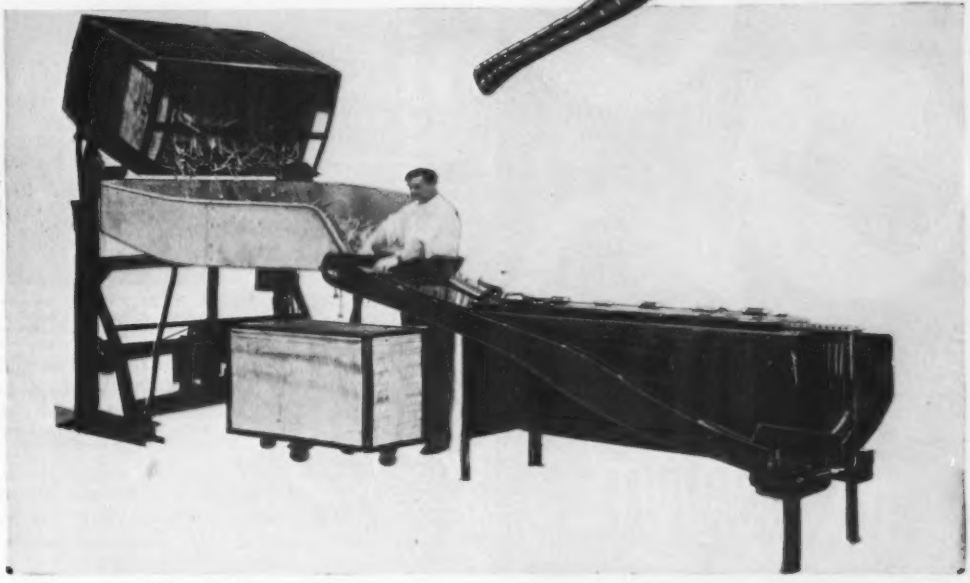
By the first of this month, OPS hoped to have ready a regulation covering rayon yarn, which has been up to now subject to the January general freeze. Raw cotton has already been covered by CPR-22, which goes into effect at the beginning of next month along with CPR-37.

Selling the QM Corps. The "Index of Military Purchasing Offices: A Guide to Industry in Selling the Military Departments," an excellent reference for mills interested in military contracts, has been revised by the Central Military Procurement Information Office of the Munitions Board in Washington. The guide lists all the procurement items assigned to each of the military departments for combined buying. In addition, the location of Army, Navy, and Air Force offices responsible for buying each item is given.

Wool Support Prices. 1951 wool and mohair support prices, averaging 50.7¢ per lb. for wool and 53.4¢ per lb. for mohair on a national basis, were recently made known by the U. S. Dept. of Agriculture. The 50.7¢ average figure for wool is 90% of the March 15 parity of 56.3¢ per lb. The mohair support figure of 53.4¢ per lb. is 74.1% of the March 15 parity of 72¢. No wool or mohair was acquired under the 1950 program, and purchases probably will not be necessary this year either. At the end of May, the OPS ordered new ceiling prices for Wool and Wool-top futures that were 9 % below the ceilings in effect since April 6.

HERE'S THE POINT--

YOU SAVE ON LABOR AND BOBBIN COST



WITH "TYPE L" BOBBIN CLEANING EQUIPMENT

Terrell's fast, efficient Type L machine introduces *a new saving* in modern bobbin cleaning—longer life for bobbins.

Feeler waste is removed by the gentle blowing action of air jets. There's no scraping or scratching. Waste ends are engaged and swiftly unreeled by brushes which never touch the quill. The possibility of damage to quill or quill finish is completely eliminated.

Labor saving advantages of the Type L have been proved in mills throughout the industry—speed 90 to 140 quills per minute—easily, safely operated even by low-skilled employees—quickly adjustable to a wide variety of designs and sizes. Bobbin handling problems of every variety are mastered by Terrell conveying equipment.

Why not talk to a Terrell engineer about your bobbin cleaning problems?

The TERRELL MACHINE CO., *Inc.*

CHARLOTTE, N. C.

Here's the answer to your BEARING problems

Non-contaminating
Non-warping

Long-lasting
Self-lubricating

MORGANITE

– recommended for dye vats, immersion rolls and general textile service

Operates efficiently in all dyes and bleaches without ill effect to bearing or the liquids. The self-lubricating quality of the bearing is inherent in the material — no oil impregnation is used and the bearing never needs lubrication. Morganite Bearing and other carbon parts are non-warping, impart no taste or odor, are unaffected by, and will not contaminate, chemical solutions. Being self-lapping and polishing, they offer long-lasting high speed, high pressure service.

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INVESTIGATE THE ADVANTAGES of Morganite, now! Call or write for complete engineering data on Morganite self-lubricating carbon specialties, or consult our catalog in Sweet's File for Product Designers.

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Manufacturers of CARBON MOTOR and GENERATOR BRUSHES, CARBON PILES and SELF-LUBRICATING CARBON SPECIALTIES

NEWS ABOUT Suppliers

Equipment Suppliers

Acme Steel Co., Chicago, Ill., recently elected executive vice president Fred M. Gillies to the board of directors. Works manager William C. Fork was elected vice president at the board meeting that followed.

Cambridge Corp., Syracuse, N. Y., jointly owned by Arthur D. Little, Inc., Cambridge, Mass., and Carrier Corp., Syracuse, N. Y., has been formed to manufacture an air filter that will give off completely dust-free or sterile air. The filter, developed by Arthur D. Little, Inc., was first used by the Atomic Energy Commission to keep radioactive particles out of the atmosphere. Raymond Stevens, vice president of Arthur D. Little, Inc., is president of the new company. David H. Northrup of Carrier Corp. is vice president and general manager.

Draper Corp., Hopedale, Mass., exhibited its latest-model 40-in. X-2 and 56-in. X-D looms at the recent International Textile Exhibition held at Lille, France. The former was equipped with the new clock spring top motion and an aluminum lay. The X-D loom was equipped with the new No. 3 Draper Diehl power transmitter.

Eriez Mfg. Co., Erie, Pa., has made the following organizational changes: Earl C. Miller, executive assistant to R. F. Merwin, company president; M. L. Cramer, sales engineer; Emerson J. Tempas, development engineer; and W. L. Lukowski, design engineer.

Esterline-Angus Co., Inc., Buffalo, N. Y., recently appointed Robert F. Lamb sales and service engineer for the company line of recording instruments and associated products. He succeeds the late Dean Thomas.

Ex-Cell-O Corp., Detroit, Mich., recently elected Phil Huber, president and general manager of the corporation since 1937, to the newly created position of board chairman. H. Glenn Bixby succeeds Mr. Huber as president and general manager. He had been vice president and treasurer. James K. Fulks, former vice president in charge of manufacturing, was elected executive vice president. Milton B. Montgomery is now vice president in charge of manufacturing.

H. R. BACKHOUSE, managing director of Mellor Bromley & Co. Ltd., Leicester, England, was recently elected chairman of the board of directors of the British textile-machinery firm. He succeeds the late T. C. Bromley, who had been chairman since formation of the company in 1919.

The Formica Co., Cincinnati, Ohio, has elected Louis J. Francisco vice president in charge of sales and advertising. He was for 11 years New York sales manager.

Foster Machine Co., Westfield, Mass., was recently awarded a "Certificate of Cooperation" by the ECA. The company was honored because it had opened its doors to visitors from Marshall-Plan nations and because of the company assistance given the visitors anxious to learn how to increase their industrial production.

Hemphill Co., Pawtucket, R. I., recently received a certificate of cooperation from the ECA for help in making the company techniques avail-

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Inc.

Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

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wrapping as you like it

You can be sure of good package appearance when you wrap on Hayssen Automatic Wrapping Machines . . . and the unit-cost of wrapping will be low. Because Hayssen machines are mechanically simple, rigid, and have few moving parts, the maintenance cost is lower and machines have a longer life. Ask for free descriptive literature—no obligation.

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ELECTRIC EYE WRAPPING MACHINES

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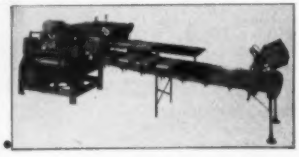


278 For more information, write direct or use Reader Service post card.

NEWS ABOUT SUPPLIERS (Continued)

M. L. (JOHNNY) JOHNSTON, with National Ring Traveler Co., Pawtucket, R. I., since the first of the year, has been assigned to the North Carolina and Eastern Tennessee territory. He will reside in Charlotte, N. C.

FRANCIS H. M. NEW has been appointed Southern representative of Riggs & Lombard, Inc., Lowell, Mass., with offices in Greenville, S. C. Mr. New is the holder of three patents in the textile-printing and drying fields.

able to teams of visiting technicians from Europe. Since 1949, some 3,000 specialists in 376 teams from 15 countries have visited cooperating plants like Hemphill to absorb essential technical knowledge.

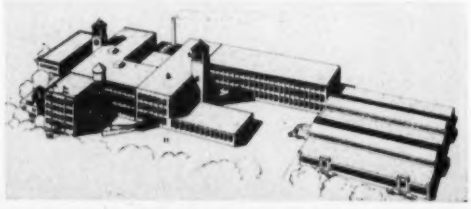
Hess, Goldsmith & Co., Inc., New York, has appointed James P. Gibbons sales representative handling the company non-woven laminated products. For the past six years Mr. Gibbons was with the central-purchasing department of General Electric Co. as a buyer of synthetic textile and insulating materials.

Link-Belt Co., Chicago, Ill., has appointed Ralph W. Rausch, former chief engineer, to the position of consulting engineer. Joseph J. Richard, former executive assistant chief engineer of the Pershing Road plant, is now chief engineer.

Minnesota Mining & Mfg. Co., St. Paul, Minn., expects construction of its new sales office and warehouse at Atlanta, Ga., to get under way soon and to be completed by Sept. 1. The two-story structure will provide 36,000 sq. ft. of floor space.

Remington Rand Inc., New York, has named E. J. McDonald and J. A. Brown assistant sales promotion managers of Remington Rand's management-controls division for tabulating and accounting machines respectively.

Rodney Hunt Machine Co., Orange, Mass., has formed a process-equipment division that will utilize various Swiss inventions for which U. S. production and patent rights have been secured. New factors in the welding and polishing of stainless-steel process equipment will have application in the textile-machinery division. A new research laboratory will be ready to develop these textile opportunities as soon as they appear.



NEW BUILDING (right) of the Foxboro Co., Foxboro, Mass., soon to be occupied by departments engaged in final assembling and testing of instruments and by the shipping department, adds 50,000 sq. ft., or nearly 25%, to the working area of the company.

NIAPROOF

TRADE-MARK

WATER-SOLUBLE
ALUMINUM ACETATE
POWDER

35.5 to 37% Al_2O_3 Content

For the manufacture of water-repellent preparations, NIAPROOF aluminum acetate is readily soluble in water so that any strength of solution can be prepared as required.

ADVANTAGES OF NIAPROOF POWDER OVER SOLUTIONS:

STABILITY... No more losses due to precipitation of solutions.

PURITY... No injurious sulfates or chlorides to tender the fabric. No contamination or discoloration from containers.

SAVINGS... Lower cost per pound of Al_2O_3 content. No leakage losses on transportation and storage. Lower freight due to negligible water content. Lower handling and storage costs. Containers can be re-used or re-sold.

For further information write to:

CARBIDE AND CARBON CHEMICALS COMPANY

A Division of
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UCC

30 East 42nd Street, New York 17, N. Y.

Are you faced with

1. [illegible] labor shortages?
2. Need for increased production?
3. [illegible] rigid quality control?

Then turn to

Mount Hope CLOTH HANDLING DEVICES

Mount Hope Precision Guider controls lateral movement of all types of fabrics within extremely narrow limits.

Purely Mechanical
Positive
Safe
Automatic

For full details, write for Bulletin PG

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Exsize-T is the new, better, thrifty desizing agent. Carefully standardized to assure absolute uniformity, it functions over a wide temperature range.

Not a chemical! Fast-acting *Exsize-T* has a neutral pH... is harmless to synthetic or vegetable fibre. Easy to use. Safe. Efficient. Write today for free booklet.

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"Exsize-T" is the registered trademark of Pabst Brewing Company.

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News About Suppliers (Continued)

Scott & Williams, Inc., Laconia, N. H., plans to manufacture, distribute, and sell exclusively a hydraulic pump invented by Lindsay H. Browne that will be known as the Scott & Williams Hydropulse pump. An arrangement has been made for the manufacture and sale by Scott & Williams of the C. W. Logeman Co. line of homogenizers (featuring the Hydropulse pump) and auxiliary equipment needed for the volume and pressures made possible by the Hydropulse pump. The new "Pioneer" Division of Scott & Williams is headed in New York by sales-head William M. Frazer. Mr. Browne is chief engineer of the new division at Laconia.

Square D Co., Detroit, Mich., recently elected L. W. Mercer executive vice president. F. H. Roby was named vice president in charge of sales. L. G. Maechtlen was also elected a vice president.

Standard Mill Supply, Inc., Charlotte, N. C., has named J. Kenneth Sumner to its sales staff. Mr. Sumner was formerly with National Ring Traveler Co. in the Virginia-Carolina territory.

Supreme Knitting Machine Co., Brooklyn, N. Y., has opened a Southern branch office at Charlotte, N. C., under the management of Alfred G. Malluck. The office is to be equipped with demonstrators for the complete company line of circular-knitting machines, including jersey and rib knitters.

Warner & Swasey Co., Cleveland, Ohio, recently appointed the following men to new posts: C. W. Bliss, former controller, to be treasurer; Irving C. Bolton, former treasurer, to be financial vice president; E. B. Gausby, former assistant treasurer, to be secretary; and Warner Seeley, former secretary, to be a vice president.

Whitney Chain Co., Hartford, Conn., has elected James W. Anderson vice president-sales and C. Robert Powers vice president-manufacturing. Mr. Anderson was general sales manager, and Mr. Powers was former consultant to the president on all phases of manufacturing.

Worthington Pump & Machinery Corp., Harrison, N. J., is building a vertical-turbine pump plant at Succasunna, N. J. Robert C. Tierney will be in charge of the new plant. Edward Barwell has been named industrial-relations coordinator of the over-all corporation.

Chemical and Yarn Suppliers

American Cyanamid Co., New York, has leased a 60,000-sq.ft. building to house its operations in Boston, Mass. The new facilities replace four separate offices and four warehouses formerly used by the firm in the Massachusetts capital.

Calco Chemical Div., American Cyanamid Co., Bound Brook, N. J., has appointed Leo J. Sobell a representative in the New York area for the pigment department. He has been with the pigment department since 1949. Francis J. Verduin has been transferred to the St. Louis territory. Alden R. Loosli, assistant manager of the intermediate and rubber-chemicals department, is attending a three-months' course in Advanced Management at the Harvard Graduate School of Business Administration.

Celanese Corp. of America, New York, plans to construct a modern chemical plant at Pampa, Texas, in the Panhandle area. Basic yarn and plastic materials are among the raw materials to be produced at the new plant. Edward H. Miller has been appointed an assistant treasurer of the firm.

Chemstrand Corp., jointly owned by Monsanto Chemical Co. and American Viscose Corp., has made arrangements to borrow $110,000,000 from institutional investors to finance construction of plants that will manufacture the new acrylic fiber, Chemstrand, and will process and manufacture nylon under an arrangement with Du Pont. Decatur, Ala., is the site for the first Chemstrand plant. Additional plant locations are under consideration.

Delaware Rayon Co., New Castle, Del., which in turn

For Perfect Spools at Higher Speeds-

SIPP-EASTWOOD

WINDER-REDRAW

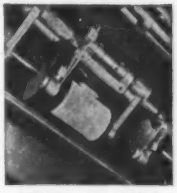
- **SELF-THREADING TENSION**
- **SELF-OPENING SPINDLELESS ATTACHMENT**
- **FULL SPOOL STOP MOTION**

Deliberately designed for perfect spools at higher speeds and greatest possible automatic operation. This brand new winder-redraw requires a minimum of attention during operation and is easy to clean and maintain.

Features:

1. **Washer type self-threading tension** fastened to traverse rail is easily adjustable and quickly cleaned. Eliminates all threading operations.
2. **Gate type tensions** available with self-threading Alsimag guides for nylon.
3. **Full spool stop motion** prevents overrun bobbins.
4. The drive and traverse mechanism is enclosed in one complete unit and is lubricated by a circulating oil bath.
5. Traverse adjustment is independent on each side of machine and can be adjusted from 3½" to 7" traverse without changing cam.
6. Speed changes are readily accomplished through the use of a handwheel.
7. Winds per stroke easily adjustable.
8. Single or double drive self-opening spindleless brackets are available.
9. Easily changed for "S" or "Z" twist by use of reversing switch.
10. Tachometer available for easy speed readings.

Self-Threading Tension



Full Spool Stop Motion

Gate Type Tension

Write for Descriptive Folder

SIPP-EASTWOOD CORPORATION

Producers of superior equipment for textile processing.

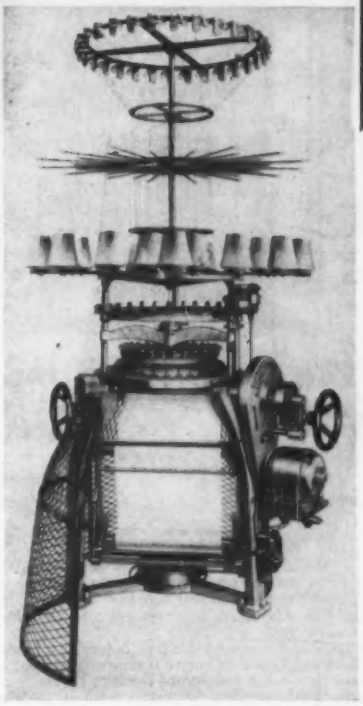
47 Keen Street, Paterson, N. J.

WESCO STOPMOTIONS

FOR

OUTERWEAR • UNDERWEAR • HOSIERY

SUPREME ANNOUNCES
A NEW RIB CLOTH MACHINE
WESCO EQUIPPED



Wesco Stop Motions of Course!

Manufacturers and knitters all over the world buy and specify Wesco. They know from experience *Wesco stop motions* get the best out of the machines they build and buy.

Supreme's Model SR produces a quality rib cloth at high rates of production. It incorporates many basic supreme design principles of simplified yet versatile construction.

LOOK FOR WESCO
on all these knitting machines:

H. Brinton Co.
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Edmos Products Corp.
Fidelity Mach. Co., Inc.
Jacquard Knitting Mach. Co.
Lamb Knitting Mach. Co.
Leighton Machine Co.
Ordnance Gauge Co.
Scott & Williams, Inc.
Stafford & Holt, Inc.
Supreme Knitting Mach. Co.
Wildman Mfg. Co.

STANDARD THE WORLD OVER

STOP MOTION DEVICES CORP.
1471-77 Fulton St. Brooklyn 16, N. Y.

Another of a Series of Knitting Machine Builders. Others to Follow.

The test behind the . . .

Guarantee

Before you can guarantee a product, you have to know how it will react to conditions it is expected to meet during its service life. Moreover, when you want this information, you want it fast!

When it comes to washable fabrics (or any other washable product) the Launder-Ometer is the machine that can give you the facts—in a fraction of the time normally required. Accepted as the standard laboratory washing machine of the American Association of Textile Chemists and Colorists, the Launder-Ometer can duplicate the effects of as many as 5 commercial launderings in one forty-five minute test. The data thus provided includes loss of tensile strength, color fastness, resistance to shrinkage, bleeding, washing and mechanical action, and other equally important information.

The Launder-Ometer is also in widespread use for the laboratory dyeing of leathers and textiles and for the testing of dry-cleaning oils and solvents and the efficiency of detergents and soaps. As many as 20 samples can be conducted simultaneously and conditions used for any given test can be reproduced at any time.

Operation of the Launder-Ometer is simple. It is a carefully built machine, soundly constructed, and economical in maintenance and operating costs. Available in 3 sizes with capacities of 20 one pint jars, 20 one quart jars, or 6 two quart jars plus any combination of 10 one pint jars or 10 one quart jars. All models are electrically driven, ¼ HP to ½ HP.

New Inconel jars designed in accordance with A.A.T.C.C. specifications for the new Accelerated Wash Fastness Test No. 3A are now available from Atlas.

ATLAS ELECTRIC DEVICES COMPANY

361 West Superior St., Chicago 10, Ill.

Manufacturers of accelerated testing devices for more than a quarter of a century

WEATHER-OMETERS • FADE-OMETERS • LAUNDER-OMETERS

News About SUPPLIERS (Continued)

owns a controlling interest in New Bedford Rayon Co., New Bedford, Mass., recently had its own controlling interest purchased by Mohawk Carpet Mills, Inc., Amsterdam, N. Y. Under the Mohawk set-up, Albert Ruth, former general manager at New Bedford, has become president of both companies. Present combined annual output of the two companies is approximately 9,000,000 lb. of continuous-filament viscose rayon. Future plans include the manufacture of carpet-rayon staple.

Elgin Softener Corp., Elgin, Ill., has appointed Betz Engineering Sales Co., New Orleans, La., its sales representative in the Eastern area of the deep South.

Emery Industries, Inc., Cincinnati, Ohio, has assigned territory sales responsibilities to two new salesmen, J. A. Funk, operating out of the home office, and William J. Siemens, Jr., operating from Pittsburgh, Pa. E. G. Hibarger, now district manager of the newly established Chicago office, formerly handled the two territories.

E. F. Houghton & Co., Philadelphia, Pa., has appointed Charles R. Schmitt manager of lubrication sales. He was formerly lubrication manager for the Central and Western division, located in Cleveland, Ohio.

Monsanto Chemical Co., Merrimac Div., Boston, Mass., recently named Elmer H. Rossin technical-service manager of the textile-chemicals sales department. He succeeds Francis K. Burr, resigned. Mr. Rossin is a joint holder of several patents on textile finishes.

CHESTER A. STRODL has joined the Textile Fibers Dept. of Carbide & Carbon Chemicals Co., New York, to assist in sales development of dynel in the knitting trades, particularly knitted outerwear. He had been associated with Callaway Mills, Inc., mostly in New England, working with cotton and worsted yarns and the development of synthetics.

Wyandotte Chemicals Corp., Michigan Alkali Div., Wyandotte, Mich., has granted a leave of absence to Paul M. Bigley, assistant general sales manager. Mr. Bigley is now serving with the Economic Stabilization Agency. Thomas R. Boyle has become administrative assistant to the general sales manager and has assumed Mr. Bigley's former duties.

Other Services

Lowell Textile Institute, Lowell, Mass., has been given a Jacob Ziskind memorial scholarship by employees of the Merrimack Mfg. Co., of which Mr. Ziskind was president at the time of his death last fall. Preference in awards will be given to family members of company employees. The first recipient of the award will be enrolled at LTI next September.

The Natl. Institute for the Reduction of Industrial Absenteeism (NIKIA), New York, has been formed to sponsor integrated research among management, labor, and government on the causes and prevention of loss of available man-hours through all forms of absenteeism. The Institute will function as a national clearing house for participating companies.

U. S. Testing Co., Hoboken, N. J., recently was host to 15 French business men visiting American companies under the technical-assistance program of the ECA. Independent textile-testing methods and equipment were one of the subjects studied first-hand by the representatives of French industrial owners, managers, and workers.

PERMUTIT Q—the amazing New Zeolite —brings your Water Softener ALL THIS:

1. Up to 10 times greater capacity

2. Up to 50% greater flow rate

3. Lower salt requirements

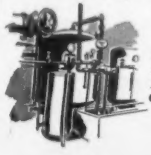
4. Less labor required for maintenance

The development of Permutit Q has made it easy for your water softener to do a bigger, better job. This amazingly efficient new zeolite softens more water, requires less salt and saves you labor by extending the time between regenerations. No softener can be truly called up-to-date without Permutit Q!

AUTOMATIC CONTROLS WILL SAVE YOU MONEY

While you are thinking of modernizing your present softener, consider converting it to automatic controls. An *automatic* supply of clear, soft water can save you costly man-hours of labor and maintenance.

Write for full information to The Permutit Company, Dept. TW-6, 330 West 42nd Street, New York 18, N. Y., or to Permutit Company of Canada, Ltd., 6975 Jeanne Mance Street, Montreal, Canada.



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"Gravy ON YOUR HAIR?"

Just because gravy goes swell over noodles, he shouldn't assume it's good on hair, too!

And just because one bearing is best lubricated by one particular grade of oil, you shouldn't assume that the same oil is best for *all* bearings on that machine. In many cases it isn't.

OIL CUPS permit you to lubricate each bearing with the oil best suited to that bearing—thus prolonging bearing life, reducing maintenance costs, cutting down-time, boosting production. And oil cups fortunately *cost very little.*

Gits oil cups have been the standard for industry for more than 40 years. Gits Bros. has the largest selection of oil cups available anywhere. Call on Gits Bros. for a prompt, efficient solution to your lubrication problems.

Write for free Price Guide Catalog

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how to prevent spoilage...

...THE *Versenes**

VERSENES* CONTROL QUALITY

In Wet Processing and Finishing the Versenes can prevent spoilage of goods in these ways:

They completely and permanently soften hardest water *without* precipitation.

- ...prevent the formation and deposition of insoluble soaps on textile fibers
- ...remove insolubles *after* they have been deposited
- ...assure cleaner fibers, deeper dye penetration, level dyeing
- ...improve cleaning and foaming action of synthetic detergents
- ...prevent and/or remove iron stains in any caustic solution
- ...inactivate and prevent contamination from either divalent or trivalent metals
- ...dissolve natural greases, oils and proteins
- ...prevent oxidation of fats, oils, soaps, fatty acids, organic materials
- ...give exacting chemical control over cations in solution.

All of these things are vitally important to the control of quality and the prevention of spoilage in textiles.

VERSENES*—NEW SOLUTIONS TO OLD PROBLEMS

The four Versenes used in textile processing are powerful organic chelating (complexing) agents. Chemically, they are the sodium salts of ethylene diamine tetra acetic acid and other polyamino acids. Versene (regular) is the most efficient general complexing agent and water softener. *Versene* Fe-3 prevents hard water deposits and iron stains. *Versene* Fe-3 Specific is the most powerful iron complexing agent known in the normal pH range. *Versene T* prevents and removes iron deposits from fabric treated with concentrated caustic. Available in liquid form, Versene T, like all Versenes, remains stable at high temperature and pH. Ask for sample and Technical Bulletin No. 2. Write Dept. D.

NEW VERSENE WATER TEST KIT. Tells total hardness in 2 minutes. Accurate to one grain per gallon. Versenate Method. Complete Kit $5 postpaid.

"INDUSTRY'S MOST MODERN CHEMICALS" *Trade Mark

BERSWORTH CHEMICAL CO.
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Southern Agent: Chas. S. Tanner Co., Liberty Life Bldg., Charlotte, N. C.

NEWS ABOUT *Mills*

Cotton Mills

Beaumont Mfg. Co., Spartanburg, S. C., has installed an Orthorater in its clinic as part of a mill health and safety program to correct physical deficiencies and improve worker efficiency. Physical examinations are offered free to all employees with ten or more years of service.

Berkeley Mills, Inc., Balfour, N. C., has expansion program under way that will double present production capacity and increase employment by 50%. Mill now operates 28,000 spindles and about 500 looms and employs 400 workers. Completion of the expansion program is expected early next year by the company.

California Cordage Co. is reported to be planning construction of a $500,000 cotton mill at Orange, Calif. The plant will employ 125 persons and occupy an area of 47,000 sq. ft. Heavy cotton yarn will be manufactured, largely for government use.

Dominion Textile Co. Ltd., which has completed its first major postwar plant-modernization and expansion program at Magog, Que., is now planning a second major project at its Merchants Branch in Montreal. Plans being considered call for expenditure of several million dollars on machinery and equipment that will include spinning frames, looms, etc. Merchants Branch operates approximately 85,000 spindles and nearly 2,000 looms.

Esmond Mills Ltd., Granby, Que., which has under construction a 12,000-sq.ft. building for picking and carding machinery, is erecting a second 12,000 sq.-ft. addition for installation of four sets of Tomlinson Bros. nappers and two spinning frames.

Glendale Mills, Inc., Douglasville, Ga., has increased its carding equipment by 40% and number of looms by 25%.

Harmony Grove Mills, Commerce, Ga., has begun an expansion program to enlarge its present mill and production facilities by 50%. Plans call for full operation by the end of 1951. Mill manufactures sheetings, shirtings, and drills, as well as food-packaging fabrics and goods for pyroxylin coating trade.

Powdrell & Alexander, Inc.,

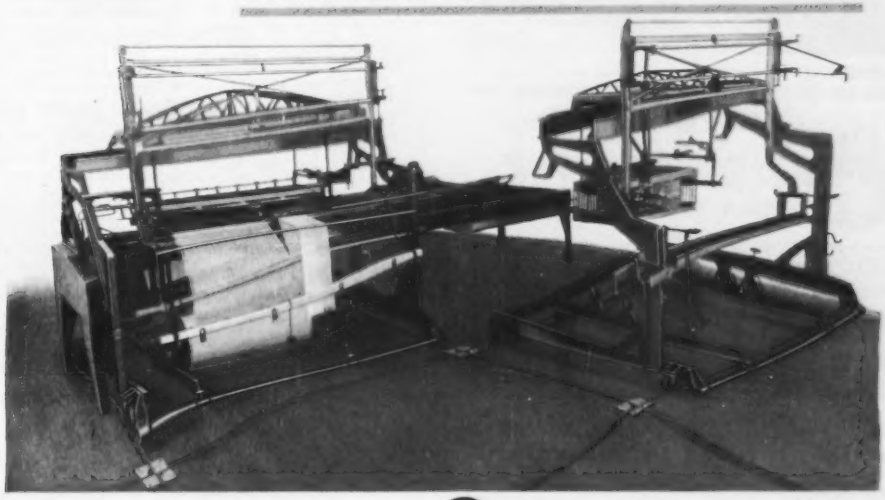
HILADOS DEL NORTE S.A., Monterrey, Mexico, is planning to enlarge the two-year old plant shown above to increase present facilities for production of carded and combed cotton yarns for the knitting trade in Mexico. The present building of reinforced concrete is equipped with high-intensity fluorescent lights, and humidity is closely maintained by American Moistening Co. evaporative cooling system. The mill has 7,500 spindles. The new additions now on the drawing board will be similar to the present plant in design and equipment.

BARBER COLMAN

FASTER REPLACEMENT

STRAIGHTER WARPS

LOWER COSTS



BARBER-COLMAN MODEL F *Warp Drawing Machine*

The Model "F" Barber-Colman Warp Drawing Machine is designed for mills which have a combination of cam and dobby loom work. This particular model is useful to mills that employ 14 to 18 harness shafts or less, with 8 or less banks of warp stop motion. Any mill weaving gingham, shirtings, dress goods and suitings will find this machine exceptionally useful, especially if quick change-overs in style and pattern are common. This model answers a variety of needs in your warp replacement scheme.

Field reports show up to 3000 Ends per Hour

Draws warps from 10 to 300 ends per inch
Draws from flat sheet or 1 x 1 lease
Draws from single or double beam, or split sheet
Draws 1 x 1 lease in double beam or split sheet

Warp threads are drawn through drop wires, heddles and reed

IN ONE OPERATION

from any predetermined draft

HARNESS FRAME LENGTHS	
Size of Machine	Maximum Overall Length of Harness
48	54"
66	72"
86	92"

MODEL "F" MACHINE CAPACITIES

The Model "F" can be furnished in the following capacities at no difference in cost:
Reed, 14 Harness, 8 Banks of Drop Wires
Reed, 16 Harness, 6 Banks of Drop Wires
Reed, 18 Harness, 4 Banks of Drop Wires
DROP WIRE CAPACITY: 9/32" through 3/4" wide

WILL DRAW

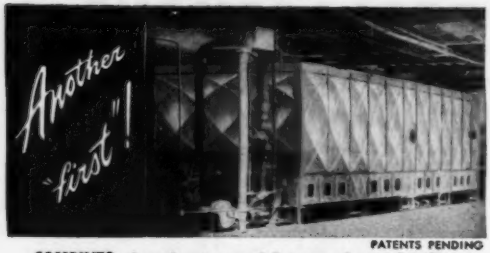
- Cotton Yarns
- Filament Yarns
- Spun Yarns
- Woolens and Worsteds
- Monofilaments

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY

ROCKFORD • ILLINOIS • U. S. A.

FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND MUNICH, GERMANY



PATENTS PENDING

COMBINES the advantages of 3 types of oven-heating:

(1) INFRA-RED RADIATION (2) CONVECTED HEAT

(3) HEATED AIR—with added turbulence

CARBOMATIC "UNA-RAY" OVEN

Greatly increased efficiency! For example: 40 linear feet of "Una-Ray" Oven equal the productive capacity of 70 feet of a conventional oven-type. Saves thousands of dollars in equipment cost and operational economies. No burning, scorching, spotting or marking of goods. No crocking. No "gas fading" or color migration. Uniform color is insured.

A general-purpose oven (of any capacity needed) that provides accurately-controlled working temperatures up to 550°F. For drying; drying and curing in one operation; resin fusing; Nylon setting, etc. *Write for Bulletin TW-6.*

CARBOMATIC CORPORATION • Pioneers in Textile Infra-Red

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Southern Branch: Textile Specialty Co., Greensboro, N. C.

New England Representative: H. E. Linderson, 38 Westminster St., Providence, R. I.

For Maintained Shrinkage—

Perfect Finish—Long Life

HUYCK

→COMPRESSIVE SHRINKAGE←

BLANKETS

***for use in shrinking fabrics to the "Sanforized"* standard by the Compressive Shrinkage process, are daily meeting the most exacting requirements of finishers throughout the industry. From the lightest and finest fabric to the heaviest denim, there is a special Huyck blanket to meet your specific needs.**

Huyck blankets retain high shrinkage and finish properties to the last.

***PALMER BLANKETS*—also available for your special requirements.**

Write for information or see our representative

F. C. HUYCK & SONS

KENWOOD MILLS

Rensselaer, N. Y.

News About MILLS (Continued)

Glendale, Calif., has sold equipment and its local mill and will discontinue curtain-manufacturing operations on the West Coast.

Standard - Coosa - Thatcher Co., Piedmont, Ala., plans expansion of picker and opener rooms and installation of American Air Filter Co. lint arresters to clean return air normally exhausted to dust basement.

Stauffer-Dobbie Ltd., Galt, Ont., has completed a 125-ft. chimney for its new boiler room.

Swift Spinning Mills, Inc., Columbus, Ga., plans construction of a one-story addition to plant. Addition will be equipped as a lunchroom and first aid station for the convenience and use of employees of the mill.

Textron, Inc., has abandoned plans for expansion of its plant at Cordova, Ala., in view of strike called by CIO-TWUA. Company had planned to spend $2,400,000 for improvement and expansion at Cordova.

University of Tennessee, Knoxville, Tenn., trustees have approved new cotton-research building at Knoxville, to house miniature testing laboratory for evaluation of cotton strains. A $25,000 initial grant for the laboratory has been made by Div. of Cotton and Other Fiber Crops, U. S. Dept. of Agriculture.

Victor-Monoghan Div. of J. P. Stevens & Co. is building a new one-story, 55,000-sq.-ft. weave-room addition to its existing five-story mill at Greer, S. C., at cost of around $750,000. Company will install 300 new heavy-duty 78-in. looms. Daniel Construction Co. of Greenville, S. C., is general contractor.

Woolen and Worsted Mills

Alexander Smith & Sons Carpet Co. stockholders have approved a change in name of company to Alexander Smith, Inc., in recognition of increasing diversification of company activities. Main office is at Yonkers, N. Y.

Art Loom Carpet Co., Inc., Philadelphia, Pa., has exercised its option to purchase all outstanding stock of Greenville Mills, Inc., Greenville, N. C., and will operate plant as a wholly owned subsidiary. Plant will manufacture woolen yarn for blankets and carpets.

Bigelow-Sanford Carpet Co. plans to expand its rug mill in Summerville, Ga. The company will spend $1,500,000 for new plant and will increase value of output from $2,000,000 annually to $12,000,000. Upon completion, firm will increase employees from 100 to 300 persons.

Collins & Aikman of Canada Ltd., Farnham, Que., has completed a weave-room addition to its plant started just before end of 1950 and is installing new machinery. Increase in production capacity is about 50%. New building is one-story and occupies 25,000 sq. ft. of floor space. A new office building in front of main building provides about 5,000 sq. ft. of floor space.

Halifax Worsted Mills, Halifax, Va., has broken ground for a new addition that will add approximately 30% of floor space to its present plant. The new unit will process scoured wool into wool top. About 75 additional operatives will be employed.

Hardwick Woolen Mills, Cleveland, Tenn., has sold fabric manufacturing equipment to John L. Hutchenson, Jr., president of Peerless Woolen Mills, and his brother, Lewis Hutcheson. Plant will operate independently of Peerless Corp., Rossville, Ga.

Mohawk Carpet Mills, Amsterdam, N. Y., has leased a spinning mill at Unionville, Conn., and a building in Amsterdam to be used for additional warehouse space. Connecticut mill is being leased from Hartford Spinning, Inc., but spinning machinery has been purchased outright.

Palmetto Worsted Mill, Laurens, S. C., plans to construct a new $100,000 textile plant at Laurens. Company plans to lease a building and construct addition which will provide total of 7,000 sq. ft. of floor space. Worsted mill will operate independently of Palmetto Spinning Corp. and will spin fine-count worsted yarns for machine knitting.

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about WAMESIT'S NEW
MODEL "H"
HIGH SPEED BEAMER

Another Engineering Advancement

Actual production figures obtained from various mills report 4 to 5 more cuts per beam (80 yds.) with the hydraulic compressor unit and comparative running time 15 to 20 min. for 18 to 24 cuts per beam. This means less tying in time, longer loom runs. Beams up to 36" dia. accommodated.

Direct removal of loom beam from machine, no pulling endwise as on other conventional units. All above advantages plus the control of yarn density make this beamer the most modern unit on the market today.

Offered to sell at a price which cannot be overlooked and readily amortised by its outstanding performance.

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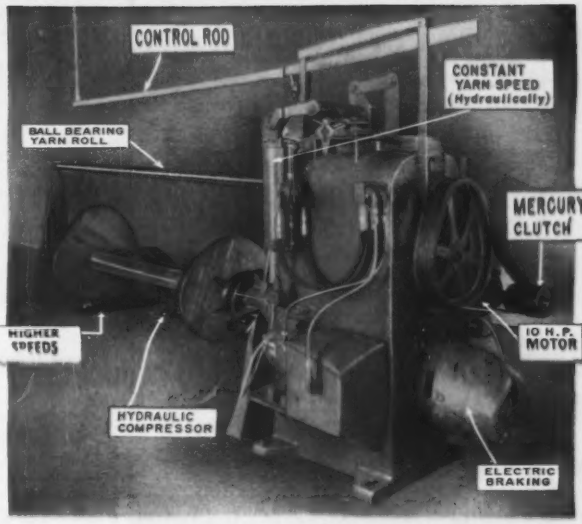

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CLINTON Textile Starches are scientifically manufactured with unvarying uniformity assured. Clinton Starches give your warp the necessary body, strength and pliability that means quality weaving every time. For years Clinton has been a leader in the production of starches for all textile purposes.

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PHOTOVOLT CORP.

95 MADISON AVENUE NEW YORK 16, N. Y.
Also: Colorimeters, Fluorescence Meters, pH Meters

News About Mills (Continued)

Spinning corporation manufactures coarse-count worsted yarns.

Pioneer Worsted Co., New Braunfels, Tex., is constructing a worsted weaving mill. Eight looms are expected to be in operation within six months weaving fine fabrics for men's suits and women's wear.

Potomac Yarn Production Co., Washington, D. C., will begin wool-processing operations at plant in Charleston, S. C., next month. Company has purchased two buildings at Stark Industrial Park with a total area of 9,000 sq. ft. Company produces hand-knitting yarn.

Charles van Spaendonck, head of firm bearing his name, which has been in business in Holland since 1790, is planning to establish a new woolen and worsted weaving plant in Granby, Que. Vacant building acquired on St. Cécile St., Granby, will be enlarged. Dutch firm intends to install 20 looms and other equipment. Firm will import all of its yarns but will do its own dyeing and finishing.

West Coast Woolen Mills Ltd., Vancouver, B. C., is erecting warehouse on East Hastings St., Vancouver, for storage of raw materials. Building will be 136x61 ft., with concrete-block walls 16 ft. high.

Synthetics Mills

Aberfoyle Mfg. Co., New York, N. Y., has discontinued weaving operations and has sold controlled interest in wholly owned subsidiary, Aberfoyle, Inc., at Norfolk, Va., to David Seidman and Myron Alexander of New York. Property includes two-story building and equipment, and about 300 looms. New owners will continue weaving plant as part of their operations.

American Enka Corp., Enka, N. C., expects to increase its rayon production by the end of 1951 to 92,000,000 lb. annually as a result of company's current expansion program.

American Viscose Corp., Front Royal, Va., plans expansion in local mill, with installation of additional equipment for increased capacity. American Viscose has similarly authorized expansion in plant at Nitro, W. Va., including building extensions and installation of equipment.

Burlington Mills plans construction of a weaving plant at Sanford, N. C., which will employ 1,400 persons. Plant will weave rayon, acetate, Orlon, dynel, Dacron and other synthetic fibers. The company has borrowed $30,000,000 from Equitable Life Assurance Society and Metropolitan Life Insurance Co. for use in its current expansion program.

Celanese Lanese Corp., Burlington, N. C., is undertaking an expansion program that includes the erection of an additional building and the installation of new production machinery. Program will be completed shortly after middle of year. The building will be of reinforced concrete and was designed by the central engineering department of Celanese Corp. of America. Celanese Lanese will later establish a fully equipped research and development department.

Century Ribbon Mills, Inc., New York. N. Y., is building a $75,000 addition to its plant at York, Pa. I. Reindollar & Son, York, is contractor.

Chemstrand Corp., which is building a $40,000,000 acrylic synthetic-fiber plant at Decatur, Ala., plans to build another multi-million-dollar plant in the same area to produce nylon. The corporation has been negotiating with E. I. du Pont de Nemours & Co. for a license to produce 50,000,000 lb. a year. The proposed additional plant, Chemstrand officials say, will cost about $70,000,000 and employ some 2,700 persons. The Decatur plant will have a capacity of 30,000,000 lb. of staple annually.

Consolidated Textiles Ltd., Joliette, Que., has let contract for the erection of boiler-room addition to its plant on Archambault St.

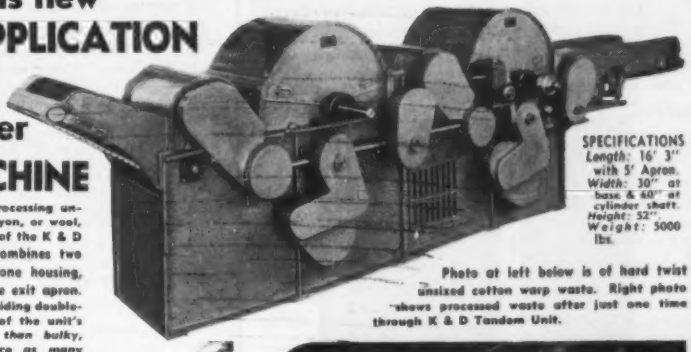
Copland-Fowler Industries, Inc., Hopedale, N. C., has begun manufacture of material for women's lingerie. New plant will operate 224 64-in. model-XD Draper looms.

Columbia Cellulose Co. Ltd.,

YOU CAN NOW WHIP THE "HARD WASTE" PROBLEM

with this new

TANDEM APPLICATION of the K&D Single Cylinder WASTE MACHINE



SPECIFICATIONS
Length: 16' 3" with 5' Apron.
Width: 30" at base & 60" at cylinder shaft.
Height: 52"
Weight: 5000 lbs.

Designed to meet the need for processing unsized "Hard Waste" in cotton, rayon, or wool, this new TANDEM APPLICATION of the K & D Single Cylinder Waste Machine combines two or more single-cylinder units in one housing, with only one feed apron and one exit apron. This TANDEM APPLICATION, providing double-action waste processing on each of the unit's cylinders, is for *more efficient than bulky, conventional machines with twice as many cylinders.*

Photo at left below is of hard twist unsized cotton warp waste. Right photo shows processed waste after just one time through K & D Tandem Unit.

BEFORE AFTER

The mill* which sent the "Hard Waste" sample shown at right ordered one K & D TANDEM UNIT immediately after we ran their samples. They were so pleased with their installation that they have already ordered additional units! (*Name of Mill on request.)

Write, wire, or telephone for details of uses, cost, and installation of the new Tandem Application of the K & D Single Cylinder Waste Machine.

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Manufacturers of K & D Single Cylinder Waste Machines, F-5 Hopper Feeders, in any width, Sargent Combs For Hopper Feeders.

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★ Designed for grinding revolving flats four simultaneously—dismounted from the cards. Absolute precision in setting is the aim.

★ Dronsfield's Patent-Traverse Wheel Grinder, No. 120.

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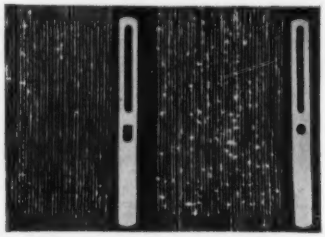
"Slide-tex" DROP WIRES

. . . with straight eyelets

The straight eyelet — a feature of "Slide-Tex" Drop Wires — gives more bearing surface, causes less friction and results in fewer thread breakages. In addition, yarn does not cut slots in the drop wires — something which often happens when droppers with round eyelets are used.



The illustration above shows a comparative test of two types of drop wires: with straight eyelet and with round eyelet. The yarn was 24 S/1 cotton and the test was carried out by the Swiss Federal Laboratories in St. Gall. (Report No. 3655). The advantages are the same for all types of yarn.

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NEWS ABOUT MILLS (Continued)

Prince Rupert, B. C., has begun operations as a Canadian affiliate of Celanese Corp. of America with an annual capacity of approximately 70,000 tons of high-alpha cellulose, sufficient raw material to produce in excess of 200,000,000 pounds of acetate yarn and staple fiber.

E. I. du Pont de Nemours & Co., Inc., Wilmington, Del., has adopted the name of "Dacron" for its polyester fiber originally known as Fiber V and for one month as Amilar. Company is currently undertaking construction of a plant in Kinston, N. C., for manufacture of Dacron.

Fieldcrest Mills has plans to move rayon mill into a former woolen-mill building at Spray, N. C. Work will begin immediately on modernizing the plant. Plans are to move machinery while mills are standing for annual vacation period this summer. Rayon mill operates 404 looms and employs over 300 persons.

Frank Ix & Sons, Lexington, N. C., plans another mill expansion program and extensive landscaping of plant property. At present, 126 new wide looms are being installed to give plant a total of 408 looms and increase capacity about one-third. Plant now has 20,000 spindles.

Martin Weiner Corp., Functional Fabrics Div., is now producing fabrics for industrial uses of nylon, Orlon, Dacron, acetate and viscose rayon, and Fiber M at its Altoona, Pa., and Cheraw, S. C., plants.

Knitting Mills

Bear Brand Hosiery Co., Chicago, Ill., has formally opened its new plant at Fayetteville, Ark. Company is building a second plant at Siloan Springs, Ark., in same section of state. Bear Brand has also let contract to Gear-Maurer Construction Co., Grand Island, Neb., for a new one-story mill at Kearney, Neb.

Belton Hosiery Mills, Belton, S. C., expects to have its new plant, now under construction, completed this summer. Daniel Construction Co. is general contractor.

Burnsville Hosiery Mills, Burnsville, N. C., is constructing a brick addition that will permit 25% increase in production. Mill is now producing 3,600 doz. prs. of stockings per week.

Coopers, Inc., Millen, Ga., has begun operation of its new Millen plant. Men's and boys' underwear is being made, and other items will be added later.

F. C. Good & Sons, Inc., Philadelphia, Pa., is converting a building at Churchville, Bucks County, Pa., to a hosiery mill.

Gurney Mfg. Co., Prattville, Ala., is installing four new Supreme knitting machines as part of its program to balance production. Mill is revamping its cotton opening room and is installing Superior cleaners and other equipment.

Hanson Hosiery Co., Hull, Que., was recently transferred to a limited company to be known as Hanson Mills Ltd. Operations will continue unchanged.

Janedale Hosiery Mills, Blackwood, N. J., has added a new section to its plant to provide 50% more floor space and accommodate several new machines.

Magnolia, N. J.—Max W. Cooperson of Camden, N. J., is building a $50,000 knitting mill at Magnolia, N. J., for unnamed owner. Howard E. Hall, Camden, is architect.

Marl-Tex Hosiery Co., Boyertown, Pa., has broken ground for a new one-story, 60x128-ft., concrete-block and stucco building on East Fourth St. to replace company's present quarters.

Orient Hosiery (Brockville) Ltd., now has its new $2,000,000 plant in Brockville, Ont., in full operation. The company is owned by Canadian Silk Products Corp., which also operates Orient Hosiery (Sherbrooke) Ltd., Sherbrooke, Que. The one-story building, located on a 22-acre site in Brockville, contains 60,000 sq. ft. of floor space and has a knitting room in which 24 Reading 30-section, full-fashioned knitting machines have been installed. Six more machines have been ordered.

Palm Hosiery Mill, Inc., Los

STEAM

FOR HEAT OR PROCESS

A complete steam plant backed by undivided responsibility • Shipped completely assembled • More than 80% thermal efficiency guaranteed • 4-pass design provides 5 sq. ft. of heating surface per b.h.p. • Built-in induced draft eliminates need of expensive chimney • Simple installation • Clean, quiet operation • Heavy-duty construction assures long-lived dependability

Superior Steam Generators are manufactured in 18 sizes from 20 to 600 b.h.p. for pressures up to 250 p.s.i. or for hot water heating.

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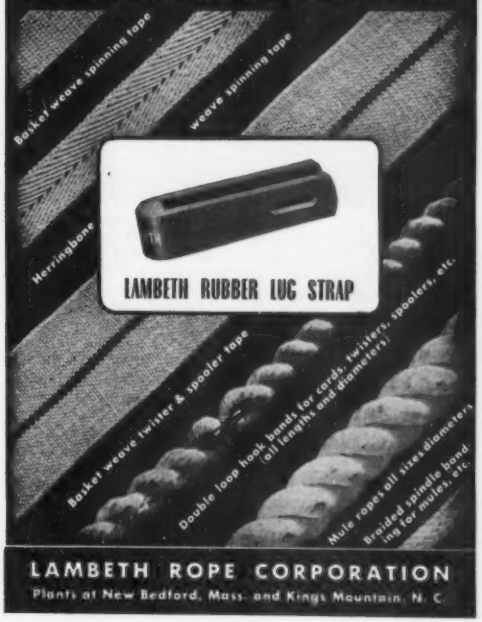
LAMBETH PRODUCTS

FOR SPINNING, TWISTING, SPOOLING, WEAVING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weave spinning tape
Herringbone
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Basket weave twister & spooler tape
Double loop hook bands for cards, twisters, spoolers, etc. (all lengths and diameters)
Mule ropes all sizes diameters
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Precision workers do the job faster and more accurately with a MAGNI-FOCUSER. Leaves both hands free to work. Gives needle-sharp binocular magnification, third dimensional vision—with less eyestrain. It restores the usefulness of the skilled hands of many older workers whose vision needs a seeing aid. Now in use in leading textile plants. Particularly applicable to 60 gauge, 15 denier yarn. 10 day trial without obligation. Return if not satisfied. $10.50—Folder on request.

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REGENT ST. EAST NORWALK, CONN.

News About Mills [Continued]

Angeles, Calif., has constructed a one-story building as part of a $200,000 expansion program. The addition will house four new 60-gauge full-fashioned hosiery machines, one of which is already installed and operating.

Richboro, Pa.—Ralph Caldwell, Bucks County, Pa., architect, has plans under way for undisclosed owner for hosiery plant to be built at Richboro, Pa.

Roanoke Mills, Inc., Roanoke, Va., has purchased equipment of Man-Lee Mfg. Co., Ashboro, N. C. Equipment has been moved to Roanoke and will be in operation at an early date.

Sanson Hosiery Mills, Inc., Corinth, Miss., plans one-story mill addition. It will be constructed by city and occupied by company under lease. Cost is about $60,000, exclusive of equipment.

Shawmut, Inc., Stoughton, Mass., has consolidated the offices of its McKem and Vanta divisions at 1350 Broadway, New York. J. L. Wyner, executive vice president of the Vanta division in charge of all mill operations; James Prigoff, vice president of the McKem division; and Donald Wyner have been elected to board of directors.

Simplex Textiles Ltd., Prescott, Ont., is now carrying out a $50,000 expansion program which involves purchase of tricot knitting machinery, dyeing equipment, and additional warehousing facilities. The program calls for addition of a one-story structure to company's present plant to provide storage space.

Victor Silk Hosiery Co., New Britain, Pa., has launched a $100,000 improvement and expansion program, to consist of decentralizing looping, seaming, and examining departments into separate rooms and disposing of eight 45-gauge full-fashioned knitting machines. These are being replaced with 60-gauge long-section Reading machines, which will be installed as they arrive during the next year. Expansion program centers on company's finishing department, where new equipment will be installed throughout to handle increased work.

Dyeing and Finishing Plants

American Thread Co. plans to construct a finishing plant at Sevier, N. C., to house mercerizing and finishing operations formerly located at Kerr Mill plant, Fall River, Mass. The Kerr mill operation represents consolidation a year ago with finishing facilities formerly at Easthampton, Mass. Earliest date for removal from Fall River is June, 1952. New plant will cost several million dollars.

Bradford Dyeing Association (Canada) Ltd., Toronto, Ont., is having considerable new electrical equipment installed in its plant in Coburg, Ont., in addition to renovation work.

Crompton-Shenandoah Co., Waynesboro, Va., is planning a new bleaching, dyeing, and finishing plant at Osceola, Ark. Cost of plant will be approximately $2,000,000.

Crystal Springs Bleachery, Chickamauga, Ga., is carrying out an expansion program that calls for a three-story 130x150-ft. extension to main mill and an addition to weave shed to house about 500 new looms. Buildings will be of modern windowless design with glazed-tile walls and insulation to prevent condensation. The mill is being air conditioned throughout. Batson-Cook Co., West Point, Ga., is building contractor; and Robert & Co. Associates, Atlanta, is architect and engineer.

Dixie Mercerizing Co., Chattanooga, Tenn., has awarded contract for construction of a one-story building at its Rudgeville Mill to be used for office purposes.

Franco-Canadian Dyers Ltd., St. Johns, Que., has let contract for a one-story warehouse addition, 30x60 ft., with Jean Paul Trahan, St. Johns, as general contractor.

Multi-Fabrics Corp., Hillsgrove, R. I., producers of rubber-backed fabrics, is planning a one-story addition, about 30x134 ft., to increase production capacity.

Santee Print Works, Sumter, S. C., is erecting a larger plant. Expansion will increase number of employees to 250.

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for safe, reliable, efficient Gas Production

Tirrill Gas Machines produce from ordinary white gasoline a safe, efficient gas for industrial or heating uses.

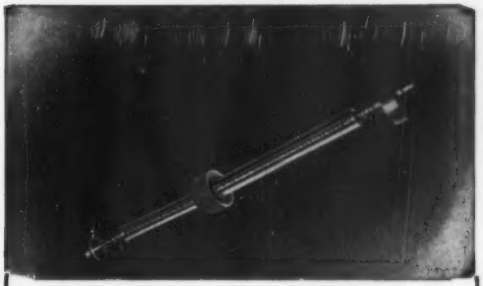
Tirrill Gas Machines are the inexpensive answer to heat problems in textile mills for processes such as singeing, drying, etc.

Gas produced the Tirrill way is clean, non-poisonous and is produced at pressures no greater than "city gas pressures."

Normal Pentane can also be used.

Your inquiries are invited.

Tirrill Gas Machine Corporation
Netcong, New Jersey



NEW ROY Internal Ball Bearing Cotton Traverse Grinder gives you smoothest grinding action ever known. The grinding wheel floats back and forth across the tube giving the wire a breezing touch action and accurate side grind.

This advantage—the result of long experimentation with various types of ball bearings—means added years of service when properly installed in a new as well as an old grinder.

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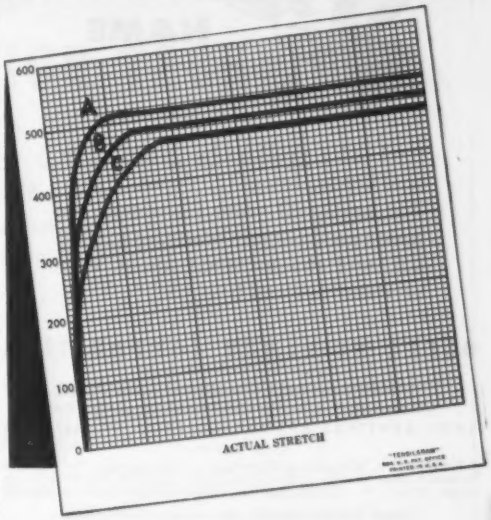

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NEWS ABOUT *Men*

Carroll S. Anderson, who did field layout work on construction of nylon plant of E. I. du Pont de Nemours & Co., Inc., at Seaford, Del., has been appointed field project manager to supervise construction of first plant to manufacture company's new Dacron polyester fiber at Kinston, N. C., now under construction.

John Atkinson, who has been superintendent of branch plant of Caron Spinning Co., Robesonia, Pa., has resigned and has been succeeded by **Stuart M. Tully.**

Henry M. Baker has joined Slane Hosiery Mills, Inc., High Point, N. C., as head of company New York office. Mr. Baker was previously employed by Adams Millis Corp., High Point, N. C.

Nelson Barlow has been appointed works manager of dyeing and finishing division of Verney Corp., Peterboro, N. H. He was formerly superintendent of rayon division of Apponaug Co. and replaces **Richard Powell,** who is now associated with Burlington Mills.

C. F. Bauserman has retired as traffic manager of P. H. Hanes Knitting Co., Winston-Salem, N. C. Mr. Bauserman had been with company for 31 years.

Abraham Berkowitz, lawyer of Boston, Mass., has been named president of Verney Corp. of Canada Ltd., Granby, Que., succeeding the late Jacob Ziskind. Other appointments include L. N. Thompson, vice president; Abraham Ziskind, treasurer; and Albert Edge, comptroller.

Joseph Bernhard has been elected president of Consolidated Trimming Corp., New York, N. Y., to succeed William J. Rosenberg, who is retiring. **Eli Freydberg,** formerly president of Freydberg Bros.-Strauss, was elected treasurer. **Hugo Flahre** was made vice president and **George J. Burrison,** secretary. Mr. Bernhard, formerly vice president, has been with company since its formation in 1929.

John M. Bierer has been elected president of Boston Woven Hose & Rubber Co., Cambridge, Mass., succeeding the late J. Newton Smith, who had held that office since 1928. **Harold B. Richmond** is now first vice president and **Marshall B. Dalton** has been elected a director.

Walser A. Blackwood, assistant general manager of Washington Mills Co. plant at Mayodan, N. C., has been named production manager of company plant at Winston-Salem, N. C.

Stuart H. Carroll, treasurer and executive secretary of the Philadelphia Textile Institute, Philadelphia, Pa., has been recalled to active duty in the U. S. Marine Corps. During his leave of absence, his duties will be assumed by Dean Richard S. Cox.

Marcus W. Carter, formerly vice president and manager, has been elected president of Hart Cotton Mills, Tarboro, N. C. He succeeds **Frank M. Leslie** of New York.

Ralph E. Case, William R. Kaelin, and **Mason H. Bigelow** have been appointed directors of Duplan Corp., New York, N. Y. They replace **Paul C. Derby, Emil Buhler,** and **Albert R. Salembier,** who have resigned.

William Christian has been appointed head of quality control for Men's Wear Div., Burlington Mills Corp., New York, N. Y., succeeding **M. T. Collins.**

Richard Clarenbach, superintendent of Franklin Mills of M. T. Stevens & Sons Co., Franklin, N. H., has been promoted to take charge of production - engineering - department for New England division of company. His new office

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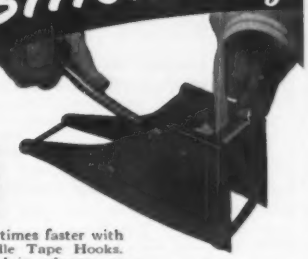

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NEWS ABOUT MEN (Continued)

will be at North Andover, Mass.

Abraham J. Cohen has retired as vice president in charge of cost system, policies, and sales for Atlantic Dye Works Co., Paterson, N. J. Mr. Cohen and his wife have sold their interest in the company to Mr. & Mrs. Herman L. Cohen, who are now sole owners of the organization.

Andrew E. Collins will be plant supervisor for Bishopville Finishing Co., Reeves Bros. new rayon-finishing plant at Bishopville, S. C.

Hugh Crombie, vice president of Dominion Engineering Works Ltd., has been elected a director of Dominion Textile Co., Montreal, Que., filling vacancy created by death of William A. Eden. Mr. Crombie also holds the position of vice president of the Canadian Manufacturer's Assn.

George English has resigned as overseer of finishing at Waldrich Bleachery, Delawanna, N. J., to become superintendent of New Era Dye & Finishing Co., Fairlawn, N. J.

W. Page Enloe, Jr., has been made general superintendent of W. A. Handley Mfg. Co., Roanoke, Ala. He is the third generation in his family to serve in this capacity.

Dwight Epperson has become superintendent of West Boylston Mfg. Co., Montgomery, Ala.

Manuel G. Garcia has been elected executive vice president and a director of G. A. Stafford Co., Inc., New York, export subsidiary of Dan River Mills, Inc. Mr. Garcia, who joined Stafford recently, succeeds J. H. Judge. Mr. Judge will continue with company but has resigned his office because of ill health.

Arthur Greenfield, Jr., has resigned as general superintendent and assistant to general manager of Pacific Mills, Lawrence, Mass.

Curtis Guffey has been elected secretary and assistant treasurer of Claussner Hosiery Co., Paducah, Ky. He continues as controller and office manager of company.

ROLAND H. GRAY has been appointed resident manager of the Goodyear Tire & Rubber Co. Hoosier plant at Charlestown, Ind. Mr. Gray, formerly vice president of the Goodyear cotton mills subsidiary, will direct the renewed production of propellent charges under government contract, discontinued by the company in 1945.

C. L. Hamilton has been named president of Crown Cotton Mills, Dalton, Ga., succeeding his brother, the late George W. Hamilton. Mr. Hamilton, formerly vice president and treasurer, will retain position of treasurer. **David Hamilton**, mill secretary, was named vice president and secretary.

Frederick S. Haslam has been elected vice president and general superintendent of Bell Co., Worcester, Mass. He has been with the company since 1926 and was appointed superintendent in 1939.

Thomas W. Hillyard has been named general sales manager of Munsingwear, Inc., Minneapolis, Minn. Mr. Hillyard has been with the company for 20 years.

John E. Hoff has been named president and general manager of Klearflax Linen Looms, Inc., Duluth, Minn. Mr. Hoff joined company in 1920 as chemist. He succeeds **Philip R. Moore**, who is retiring after 31 years with company.

J. P. Howard has become chemist at Glasgo Finishing Co., Glasgo, Conn.

F. B. Hutton has been elected president of Spool Cotton Co., New York, N. Y., succeeding **Herbert Grandage**,

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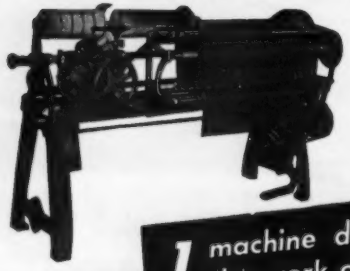

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News About MEN (Continued)

H. STANLEY WORTHINGTON, M. FRANCIS CAVALLON, and A. GRIFFIN ASHCROFT have been appointed vice presidents in charge of operations, sales, and research and development, respectively, of Alexander Smith, Inc., Yonkers, N. Y. Formerly assistant vice president of operations, Mr. Worthington succeeds Harold C. Zwaut, who has become vice president of industrial relations. Mr. Cavallon was formerly director of merchandising for the company, and Mr. Ashcroft was director of research.

who has resigned. Mr. Hutton was formerly vice president of the company. **J. W. Shaver** has been elected executive vice president in charge of sales, and **John Bell** has been elected vice president and secretary.

Walter D. Ide has retired as plant manager of Atlas Underwear Co., Piqua, Ohio.

Alexander F. Ix, president of Frank Ix & Sons, Inc., has been elected president of the National Federation of Textiles, Inc. He succeeds **Henry Neubert,** who has been president of the federation since 1947.

George Jacobs, former superintendent and general manager of Phoenix Textile Printing Co., New Haven, Conn., has become associated with the plastic-print department of Goodyear Rubber Sundries Co. in a similar capacity.

Paul A. King has been named manager of patent licensing for Bigelow-Sanford Carpet Co., New York, N. Y. He was formerly assistant to the vice president for personnel.

Walter D. Leach, Jr., formerly company coordinator of William Carter Co., Needham Heights, Mass., has been appointed production planning manager.

Dan M. Leister, formerly superintendent of Aragon-Baldwin Cotton Mills, Rock Hill, S. C., has been appointed general manager of Appleton Co., Anderson, S. C., succeeding **William G. Stinton,** who has resigned. Both mills are units of J. P. Stevens & Co., Inc.

Richard L. Leizear has been promoted to vice president and general manager of South Carolina Mills, Spartansburg, S. C.

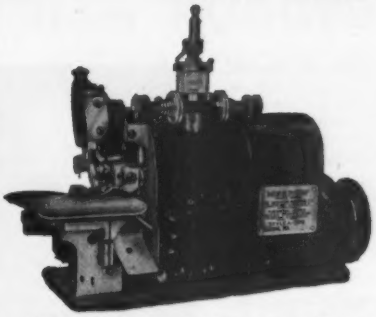
Earl S. Liberty has been elected treasurer of Utica & Mohawk Cotton Mills, Inc., Utica, N. Y., succeeding the late Chester A. Dill. Mr. Liberty was formerly secretary of the company, and **Carl F. Reiss,** who has been assistant treasurer, has been elected to succeed him. **Charles P. Castelli** has been elected assistant treasurer.

J. Harold Lineberger has been elected president of Piedmont Processing Co., Belmont, N. C.

F. H. Ludington has been made assistant vice president of Chase Bag Co., Chicago, Ill. He will have his headquarters in New York, where he will assist company vice president, C. S. Sheldon.

Luther McBee has been appointed general manager of Featherknit Fabrics, Inc., Greenville, S. C. Mr. McBee was formerly manager of southern division of H. F. Livermore Corp., with headquarters in Greenville, S. C.

J. W. Medford, treasurer for eight years of Springs Cotton Mills, Lancaster, S. C., has been promoted to position of executive vice president, with headquarters in Lancaster. **J. C. Hubbard** was named to succeed Mr. Medford as treasurer



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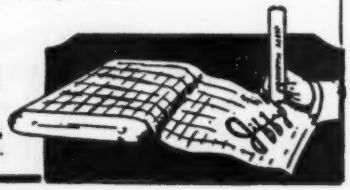


News About MEN (Continued)

and was reelected as secretary. Mr. Medford succeeded **H. R. Rice**, who was executive vice president for many years.

Frank S. Nelson has become president of William D. Sykes & Co., Inc., Philadelphia, Pa., following resignation of Mr. Sykes. Mr. Nelson was also re-elected treasurer of company.

Karl B. Nixon, formerly general manager of Newnan Cotton Mills, Newnan, Ga., has recently been elected president. Mr. Nixon succeeds **W. H. Taylor**, resigned.

Chester F. Pasternak and **Robert L. Bramson** have been appointed sales representatives of Chicopee Mills, Inc., New York. Mr. Pasternak succeeds **Robert M. Stroker** and will cover New York City, Northern New Jersey and Northeastern New York State. Mr. Bramson will be located in New York City.

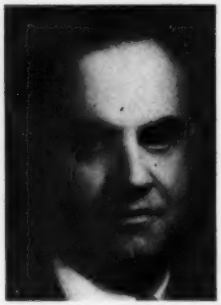
Kerwin Pernell has become assistant superintendent for M. T. Stevens & Sons Co., North Andover, Mass., having been transferred from Pentucket Mill, Haverhill, Mass.

H. D. Ruhm, Jr., president, and **Fred C. Scribner, Jr.**, vice president and treasurer, have been elected directors of Bates Mfg. Co., Lewiston, Me., to serve for a three-year term.

Louie M. Saxon, has resigned his job as superintendent of carding and spinning at Hyde Park Mills, Inc., Covington, Tenn., to become general superintendent of Western Cotton Yarns Corp., Orange, Calif. He was formerly connected with Sanders Co. as manager of West Point, Miss., plant.

Walter A. Schieman has been named administrative assistant to George D. McConnell, first vice president of Munsingwear, Inc., Minneapolis, Minn. Mr. Schieman was formerly associated with Chicago office of the Nylon Division, E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.

William W. Shoaf has been appointed a vice president of Pharr Worsted Mills, Inc., and Stowe Mills, Inc., McAdenville, N. C. Prior to accepting his new position, Mr. Shoaf was vice president and sales manager of Overseas Service Corp., Washington, D. C.



ROBERT A. HARPER has joined Columbia Mills, Inc., Syracuse, N. Y., as manager of the industrial-fabrics division. Mr. Harper was formerly plant manager of Brookfield Mills, Inc., East Brookfield, Mass.

R. Arthur Spaugh, Jr., formerly vice president of Washington Mills, Winston-Salem, N. C., has been named president, succeeding **Agnew H. Bahnson**, who is retiring after 50 years in textile business. **Charles H. Reid**, former secretary, has been promoted to vice president and secretary; **E. F. Tullock** from treasurer to vice president and treasurer; and **S. R. Bason** from auditor to assistant treasurer.

Albert T. Spaulding, for 22 years agent and treasurer of North Berwick Co., North Berwick, Me., has been elected president of the company.

Paul M. Stone, former overseer of spinning at Glenbrook Woolen Mills, Inc., Skaneateles Falls, N. Y., is now overseer of picking at Crown Mills, Macellus, N. Y.

H. R. Sweet has resigned as superintendent of wool-goods mill of Goodall-Sanford, Inc., Sanford, Me., and has been succeeded in this position by **Kenneth B. Doyle**. **Albert Johnson** has become yarn-production superintendent of pile-fabric mill of Goodall-Sanford, Inc. Mr. Johnson comes from Bristol, R. I.

T. Redmond Thayer has been named by American Enka Corp., Enka, N. C., manager of the company's high-tenacity rayon-yarn sales.

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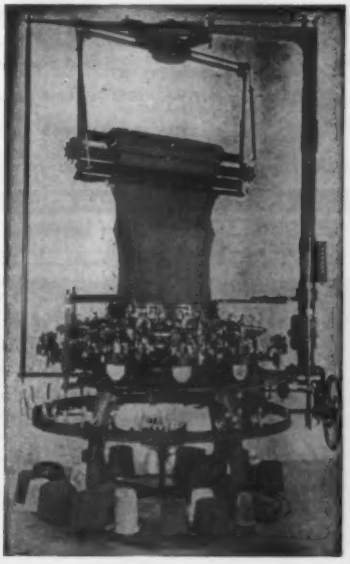

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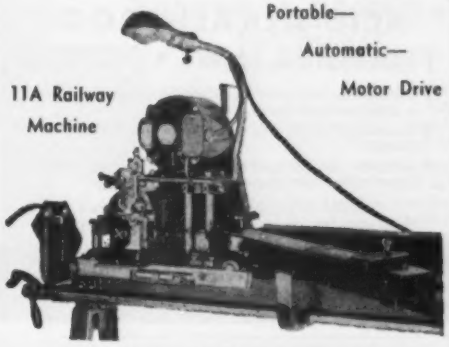

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OBITUARY

Amos M. Bowen, 75, president and treasurer of U. S. Ring Traveler Co., Providence, R. I., died recently.

Harry A. Brownhill, 75, president of Brownhill & Kramer, Coudersport, Pa., died recently.

Russell T. Fisher, 59, president and secretary of the National Assn. of Cotton Mfrs. until his retirement last September, died recently. A graduate of Lowell Textile Institute in 1914, he served at one time as assistant chief of the textile section of the U. S. Bureau of Standards. For many years he was chairman of the D-3 committee of the ASTM, and was active in the National Safety Council.

John Garrou, 86, one of the founders of Waldensian Hosiery Mills, Valdese, N. C., and a member of the board of directors of the Valdese Mfg. Co., died recently.

H. Walter Gilbert, 61, president and founder of Cutting Room Appliances Corp., New York, N. Y., died recently. Active in the textile industry for many years, he introduced the first simplified measuring and examining machine over 35 years ago, and was the inventor of several other trimming and folding machines.

Karl K. Homuth, 57, president of Otto Homuth Sons Ltd., Preston, Ont., died recently.

David W. Watson, retired president of mills operated at Pacolet, S. C., and Gainesville and New Holland, Ga., died recently. Before his retirement, Mr. Watson was also president of Judson Mills, Greenville, S. C., Monarch Mills, Union, and Lockhart Mills, Lockhart.

Thomas L. Wilson, 56, president of the Bowling Green Spinning Co., Clover, S. C., since 1946, died recently.

J. G. Cheney, former vice president and a director of Mandeville Mills, Carrollton, Ga., died recently.

Paul Guggenheim, 57, vice president of Essex-Riplyn Co., Hacketstown, N. J., died recently.

William J. Iselin, vice president and treasurer of Woodside Mills, Greenville, S. C., and vice president of Iselin-Jefferson Co., Inc., was killed in a plane crash recently.

William Mitchell, 89, former vice president and a director of Maine Spinning Co., Skowhegan, Me., died recently.

Samuel M. Yancey, 42, a member of the board of Clinchfield Mfg. Co., Marion, N. C., died recently.

Homer G. Amerine, 62, purchasing agent and plant manager of Magnet Mills, Inc., Clinton, Tenn., died recently. He had been with the firm since 1916.

Ethelbert Harman, 70, former secretary-treasurer and a director of the Sayles Finishing Plant, Inc., Saylesville, R. I., died recently. He had been with the company for 52 years at the time of his retirement.

John A. McFalls, 70, general manager of Beaunit Mills, Inc., Rockingham, N. C., unit, died recently.

Raymond C. Munroe, 58, sales engineer for National Ring Traveler Co., Providence, R. I., died recently.

Ellis J. G. Phillips, 70, director of engineering for Richards-Wilcox Mfg. Co., Aurora, Ill., died recently. He had been with the company for over 50 years.

John B. Thurston, 43, assistant to the president of Bridgeport Fabrics, Inc., Bridgeport, Conn., died recently.

John N. Walter, 56, retired general sales manager for Peter Freund Knitting Mills, Inc., North Bergen, N. J., died recently.

John E. Ormiston, 62, superintendent of dyeing at Charlestown Woolen Co., Keene, N. H., died recently.

Daniel C. Robertson, superintendent of the shipping department of Republic Cotton Mills, Great Falls, S. C., before his retirement, died recently.

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PERSONNEL DIRECTOR, university degree, experienced in cotton mill, desires connection. Location unimportant if work interesting. PW-9654, Textile World.

RASCHEL—TRICOT—Mechanic, designer of fabrics—assume charge knitting—warping—20 yrs. experience, excellent references, available at once. PW-9797, Textile World.

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We can place: MANAGERS and supts. silk throwing plants; supt. hand loom weaving plant; supt. bathing suits and sweaters; supt. worsted cloth mill; general mgr. full fash. hos. mill; rayon cloth manufacturer and stylist to head up large dept.; dye house supt. rayon-acetate fabrics; mgr. cotton yarn and cloth mill (foreign) attractive salary; personnel manager.

OVERSEERS FOR FOLLOWING DEPTS.: rayon weaving; cotton and dyeing; worsted dressing; woolen card. and spin. combined; dyeing sweaters; tricot dyeing; rayon finishing; cutting and sew. knit goods; wind., slash. and warping.

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CHEMISTS, chemical engineers and laboratory men (several); structural, designing, electrical, mechanical and plant engineers; master mechanics; asst. plant engineer; designer-tool maker for firm bldg. knit. mach.; junior engineers with technical or tex. sch. education; sales engineers; salesmen for textile machy., oils, greases, detergents, cotton yarns, etc.; methods engineer; pattern makers for knitting mills; asst. personnel mgr.; fancy worsted designers (several); carpet or floor covering designer; cost accountants; garnett operators and fixers; automatic loom fixers; woolen automatic loom fixer (So. Amer.) $100 wk.; mule fixers; fixers Banner wrap, Scott & Williams, Wildman, Supreme machines; fixer Kowet Links and Links machines; tricot mechanic; card grinders.

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5—48 x 60" D&F 3-cylinder Iron Cards, with Peraltas, breasts and tape condensers

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1—Set French Drawing (16 machines)

1—82" P&S Rev. Stick Loop Dryer

1—50" Continuous Vat Dyeing Machine, complete (Late Model)

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200—48", 52", 54", 58" R.S. C&K Plain Silk Looms, 20 h., motor driven

75—49½" R.S. Draper Model E Rayon Looms, 16 harness

98—52" R.S. Draper Mod. D Dobby Looms

52—52" R.S. Stafford 2x1 Dobby Silk Looms, motor driven

20—52" R.S. C&K 2x1 Plain Looms, Gem heads, motor driven

30—54" R.S. C&K 4x1 Plain Looms, dobbins, motor driven

10—58" C&K 2x1 S-3 Auto. Shuttle Change Looms, 25 harness

24—72" R.S. Draper Mod. D 2x1 Looms, with jacquards

8—72", 84" R.S. C&K 4x4 Box Looms with jacquards

30—72", 82" C&K 4x4 Box Looms, motor driven

60—79½", 82" Draper Mod. D Looms, 20 harness, motor driven

16—82" C&K Veribest Looms, 25 h., motor driven

100—82", 92" C&K 4x1 Auto., 25 harness Looms, motor driven

8—100" C&K 2x1 Auto. Looms, 25 harness

6—110" C&K 4x4 Box Looms, 25 harness

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2—Loop Dryers, 4 fan & 8 fan, Revolving poles.

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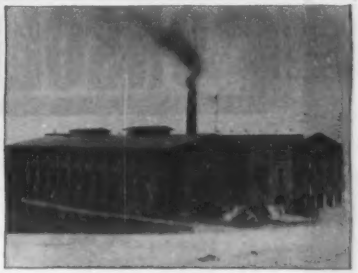

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3 RUBB CONDENSERS, 60", 20" dia. doffers.

1 Combination DOUBLING AND OPEN WIDTH WINDING MACHINE, 48".

2 DOUBLING and WINDING MACHINES, 66"-72".

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1 Harwood PICKER FEEDER, 44".

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1 NAPPER, D.A., B.B., 24 roll, 80".

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1 QUETCH, 2 rolls, 65", Copper Pan, S.S. Dry Can overhead.

5 SEWING MACHINES, Rotary Foot Power.

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55 COTTON CARDS, 40", 37" Doffers, 12" Coilers.

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20 Nasmith COMBERS, 12" Coilers, 6 Head, Model E.

1 H. & W. YARN CONDITIONER, S.T.I. Auto. Controls.

48 Draper "E" LOOMS, 47", 25 harn. dobby, mtrsd.

32 Draper XK CAM LOOMS, 47", mtrsd.

10 Draper XK LOOMS, 47", 10 harn. dobby, mtrsd.

40 Draper XD LOOMS, 64", 20 harn. dobby, mtrsd.

11 Draper "D" LOOMS, 68", 2 x 1, 20 harn., mtrsd.

70 C. & K. S-3 LOOMS, 54", harn, mtrsd.

24 C. & K. LOOMS, 72", 4 x 1, auto., 20 harn., mtrsd.

24 C. & K. LOOMS, W-2, 82", auto., 20 harn., mtrsd.

6 C. & K. LOOMS, 92", auto., 4 x 1, 25 harn., mtrsd.

4 D. & F. MULES, 360 spindles, 2½" gu., 14" bobbin.

2 D. & F. WOOL SPINNING FRAMES, Model "K", 120 spindles, 6½" gu.

WORSTED SPINNING UNIT, 960 spindles

WORSTED SPINNING UNIT, approximately 4000 spindles, with Skein Dyeing Equipment

WEAVING PLANT, approximately 66 Box LOOMS, WINDERS, QUILLERS, WARPERS, ETC.

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1—Sargent 48" Burr Picker with feed hopper.
1—Fearnaught 48" Picker, ball bearing cylinders
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3—Bramwell 60" feeders.

SPECIAL—2 Complete 7 set Woolen Mills, with all facilities, for carding, spinning, weaving, dyeing, finishing—All Iron Cards, W-3 looms, Crompton & Knowles Box Looms, 4 x 1, Individual buildings, Water rights. Near New York City.

33—Dry Cans, 102" x 23" vertical stacks, 15 HP. motor and drive.
18—Dry Cans, 46" x 23", syphon type, ball bearing.
1—NEW Stainless Steel Dry Can, 80" face x 72" diameter, ball bearing.
2—60" x 60" stainless steel gas heated dry cans, ball bearing.
1—Verdure 50" Blanket Washer, individual motor drive.
1—Cottage Steamer 12' long 78" complete with trucks, gauges, etc.
1—Acid Agar, 24' long *Stainless Steel Lined, Stainless Steel Rolls.*
2—100 gallon *Stainless* Steel Mixing Tanks with *pumps and motor.*

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1—Herman 64" Examining and Measuring Machine.
25—Saco-Pettee 11" x 31/2" Slubbers, Cone Blanco Long Draft.
14—Saco-Pettee Spinning Frames, Roth Long Draft.
36", 48" and 60" Extractors, individual motor driven.

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Consolidated is ready to serve your company by Converting your idle or surplus machinery into Cash. We are particularly interested in buying the following types of equipment: Spinning, Carding, Weaving, Coating, Printing, etc., and Stainless Steel Dyeing and Finishing Machines. We are also interested in buying Operating Plants and all negotiations are kept in strict confidence. CONTACT CONSOLIDATED!

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COMPLETE 12,000 SPINDLE COTTON SPINNING PLANT, with equipment for the dyeing and combing of yarn. Large amount of equipment put in recently. COMPLETE PACKAGE DYEING PLANT. *All Stainless Dyeing* equipment, winding and coning departments.

We strongly urge that you advise us immediately of any items that you have for sale; full specifications will be greatly appreciated.

Remember we are ready to buy from a single item to a complete plant. ACT NOW. CONTACT CONSOLIDATED.

FYANS & LIST OFFER FOR IMMEDIATE DELIVERY

DRAPER LOOMS
All Motorized

300—XD 44" goods
188—XK 42", 50", 54" goods
50—X 42" goods
56—X 52" goods
12—Mod D 68" goods
85—Mod D 64" goods
60—Mod D 73½" reed
8—Mod D 84" reed
108—Mod E 48½" reed

MISC. DRAPER LOOMS
All Disc Friction Belt-Driven

50—P 45" reed
30—D 52½" reed
2—D 45½" reed
3—D 63½" reed
4—P 71" reed

MISCELLANEOUS LOOMS

12—C&K S-6 56" B.S., motor-driven, brand-new
73—C&K S-5 56" B.S., motor-driven, 1942
20—C&K W-2 90" B.S., 4x1, 550V motor, 1936
92—C&K TERRY TOWEL LOOMS 28"-36" goods, all automatic belt-driven, 2x1 and 4x1
56—Stafford Rayon Shuttle Changing Looms —40" goods, motorized
12—Stafford Automatic Looms—76" reed, motor-driven

SPINNING FRAMES

4—Saco-Lowell 3½" ga.—tape drive, 252 sp. ea., long-draft, motor-driven, 1935
32—Whitin 3¼" ga.—tape drive, 252 sp. ea., 1939
20—Whitin 3½" ga.—tape drive, 252 sp. ea., 1921
14—Whitin 3" ga.—tape drive, 240 sp. ea., 1920
48—Whitin 3¼" ga.—band drive, 252 sp. ea.

WINDERS

3—Foster #103—100 sp. ea., double motors
2—Foster Doublers #55—72 sp. ea., 1/5 h.p. motor, rebuilt 1948
38—H&B 45" Cards—26" doffers 12" coilers

MISCELLANEOUS

4—Whitin 8x4 Slubbers—72 sp. ea., with interdraft
3—Saco-Lowell 12x6 Slubbers—68 sp. ea.
8—Medley Drawing Frames—4 and 6 del., 12" coilers, 1947-48 motors
16—Whitin Drawing Frames—5 del. per frame, 12" coilers
2—Truslow Blenders
1—Banding Machine (new)
1—Riggs & Lombard Fleetline Tenter and Baking Unit—550/60/3
2—Davis & Furber 72" Double Acting Nappers—24 rolls
1—Smith-Drum 500# Package Dyeing Machine, 1943, 550 V motor with Extractors and Dye Kettle—all stainless steel. 2 Trucks, Loader and Unloader. Excellent condition
1—Smith-Drum Skein Mercerizing Machine with pump. 12 poles each side. Motor-driven (without motors)
7—C&M Rolling-up Heads
1—72" Card Grinder—pulley drive
2—Rodney Hunt stainless steel Hump Dye Reels, complete with chain drive and clutches, 8-81½" inside B.H.
23—Jacquard Hds. (400 & 600 hooks)
160—Allen Warper Beams (high-speed)—28" hds., 10" bbls. Like new
272—Draper Beams—20" hds., 40" and 44" B.H. 6" bbl.—like new
3,700—12" Vulcanized fibre roving cans (used)
1,000—10" Vulcanized fibre roving cans (used)
10,000—Wooden Cones for #44 Winders (cork-covered)—new
1,030—45½" Pioneer Harness Frames with 12" heddles (like new)

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2—45" Aldrich 2 beater One Process Pickers, rebuilt 1948.
2—Saco-Lowell #4 Bale Breakers.
6—Saco-Lowell Single Process Pickers, 3 beater.
5—Saco-Lowell Finisher Pickers.

CARDING

8 Sets Whitin Model E, 2 cylinder Waste Cards.
34—Dobson & Barlow 45" R.F. Cards, 24" doffers.
35—Dobson & Barlow 40" R.F. Cards, 24" doffers.
3—Pettee 40" R.F. Cards, 28" doffers.
8—Pettee 40" R.F. Cards, 24" doffers.
32—Platt 40" R.F. Cards, 24" doffers.

DRAWING

92 Deliveries Saco-Lowell Drawing, 4, 5, and 6 heads.
64 Deliveries Saco-Pettee Drawing, 4 heads, 12" coilers.

ROVING

2—Woonsocket 10x5 Slubbers, Whitin Interdraft, 120 spindles.
2—Whitin 9x4½ Slubbers, rebuilt Whitin Interdraft, 114 spindles.
4—Whitin 8x4 Slubbers, H & B High Draft, 160 spindles.
2—H & B 8x4 Slubbers, High Draft, 144 spindles.
3—Saco-Lowell 9x4½ Intermediates, 84 spindles.
13—Whitin 8x4½ Intermediates, Casablanca, 90, 96, 108, 114, 126 spindles.
32—Saco-Lowell 8x3½ Speeders, 160 spindles.
6—Woonsocket 8x3½ Speeders, 160 spindles.

SPINNING

30—Whitin Tape Drive Spinning Frames, 3½" gauge, 276 spindles.
24—Whitin Tape Drive Spinning Frames, 1941 Whitin Long Draft, 3" gauge, 224 spindles.
15—Whitin Tape Drive Spinning Frames, 2¾" gauge, 224 spindles.
58—Whitin Tape Drive Spinning Frames, 2¾" gauge, 240 spindles.
18—Fales & Jenks Tape Drive Spinning Frames, Saco-Lowell Long Draft, 3½" gauge, 240 spindles.
15—Whitin Tape Drive Spinning Frames, 3½" gauge, 252 spindles.
2—Whitin Wool Ring Spinning Frames, 6½" gauge, 5" ring, 120 spindles.

TWISTERS

9—Whitin Model B (1937) Twisters, Tape Drive, 3½" gauge, 2½" rings, 200 spindles.
4—Saco-Lowell Twisters, Tape Drive, 3½" gauge, 2½" rings, 132 spindles.
53—Draper Twisters, Band Drive, 3" gauge, 240 spindles.
14—Draper Twisters, Band Drive, 3¼" gauge, 220 spindles.
10—Draper Twisters, Tape Drive, 3¼" gauge, 220 spindles.
5—Draper Twisters, Tape Drive, 3" gauge, 240 spindles.
18—Whitin Twisters, Band Drive, 4" gauge, 2¾" rings, 120 spindles.
3—Saco-Lowell Jack Twisters, Tape Drive, 3" gauge, 1¾" rings, 216 spindles.
16—Whitin Jack Twisters, Tape Drive, 3½" gauge, 1 15/16" rings, 240 spindles.

WINDERS

1—Universal No. 44 Roto Coner, wood cones, 120 spindles.
5—Foster Model 102 Winders, wood cones.
4—Foster Model 103 Winders, wood cones.
1—Foster Model 102 Winder, 50 spindles paper cones, 50 spindles paper tubes.
4—Foster Model 30 Winder, 100 spindles paper cones.
12—Universal #50 Winders, cones or tubes, single and multiple end wind.
50—Universal #90 Winders, underneath and overhead disc quill tensions.
3—Universal #40 Winders.

WARPING

2—Sipp Eastwood Sectional Warpers.
1—Entwistle High Speed Warper.
2—Barber Colman High Speed Warpers with 540 end creels, 1947, 1948.

SLASHERS

6—Saco-Lowell Slashers, 5' and 7' cylinders.
1—Johnson 72" 7 can Slasher, stainless steel.
1—Saco-Lowell 3 drum Slasher, 5' cylinders.

LOOMS

71—Draper Modified D Looms, 78½" reed space, 2x1 box, Gem head, belt driven.
38—Draper Modified D Looms, 79¼" reed space, dobby, motor driven.
14—Draper Modified D Looms, 71½" reed space, dobby, motor driven.
12—Draper Modified D Looms, 77" reed space, dobby, motor driven.
40—Draper Model H Looms, 72" reed space, side cams, motor driven.
99—Draper Model H Looms, 71" reed space, Gem head, motor driven.
24—Stafford Shuttle Change Looms, 100" reed space, motor driven.
28—Stafford Looms, 76" reed space, dobby, motor driven.
138—Crompton & Knowles 4x1 box Looms, 90" reed space, side cams, motor driven.
150—Crompton & Knowles 4x1 box Looms, 85" reed space, side cams and Jacquard, motor driven.
47—Crompton & Knowles 4x1 box Worsted Looms, 82" reed space, Gem head, motor driven.
20—Crompton & Knowles 4x4 box Worsted Looms, 82" reed space, Gem head, motor driven.
8—Crompton & Knowles Tire Cord Looms, shuttle change, 75" reed space, roller top, motor driven.

NAPPERS

5—Woonsocket Nappers, 105", 36 roll double acting.
4—Woonsocket Nappers, 80" 14 roll single acting.
6—Davis & Furber Nappers, 90", 36 roll double acting.
4—Grosselin Nappers, 102", 14 roll single acting.
6—Woonsocket Felters, 98", 22 roll single acting.
2—Woonsocket Felters, 84", 36 roll double acting.

MISCELLANEOUS

2—Hygrolit Yarn Conditioners.
5—Barber Colman Model LC Tying-in Machines.
1—Barber Colman Model LS Tying-in Machine.
2—Butterworth 50" Palmers, with blankets.
1—Butterworth 90" Micro Set Pad, 2 rubber rolls.
6—Curtis & Marble Inspecting Machines, 44", 80", 98".
1—72" Vat Steam Ageing Box.
1—Morrison 64" Horizontal High Pressure 5 can Dryer.
1—Abington Vacuum Stripping System, 1947.
1—Pennsylvania 12x8 Compressor.

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Approximately 100,000 square feet excellent manufacturing area in Georgia

56—H&B 40" cards, 26" doffers, 12" coilers.

28—H&B 3½" gauge spinning frames: 14—204 spindles each 14—228 spindles each, tape drive, 9" traverse, 10" ball bearing cylinders.

6—Whitin 3¾" gauge spinning frames, 240 spindles each, Saco-Lowell long draft, 4 spindle band drive.

5—Whitin 3½" gauge spinning frames, same as above.

56—Draper X Model looms, 57½" reed space, 2 harness, motor driven.

84—Draper Modified D looms, 60" reed space, 2 harness, motor driven.

38—Draper Modified D 44½" reed space, 2 harness, motor driven.

30—C&K C-5 looms, 37½" between swords, center name terry towel looms, motor driven.

514—C&K Cotton King Looms, 48½" between swords, automatic 4x1 box, motor driven, 25 harness dobbies.

1—Indigo dye machine.

COMER MACHINERY COMPANY

308 Ivy Street, N.E. Atlanta, Georgia

CYpress 2505 Cable—Comach P.O. Box 1244

S&K Where your $$$$ buy MORE

72 C & K S-3 Looms 54" R.S.

LOOMS

DRAPER PLANT OPERATING
94 LOOMS AUX-MACHY

50 C & K 2x1 52" R. S.
16 C & K 2x1 Automatic 72" R. S.
6 C & K 4x4 72" R. S.
56 C & K 4x1 56" R. S.
4 C & K 110" R. S. 4x4
2 C & K 100" R. S. 4x4
12 C & K 92" R. S. 4x1 Automatic
18 C & K 4x1 Automatic 82" R.S.
5 C & K 4x4 82" R.S.

7 CAN JOHNSON SLASHER
66" WIDE

DYEING MACHINERY

1 Jostrom fabric conditioner 64"
1 14 can Butterworth dryer 142"
1 19 can Butterworth dryer 72"
1 V.V. 60" Quetch
1 Textile Tester Frame 52" wide 40' long
1 Butterworth T.F. 80'
4 Three (3) Roll Padders 45"
30 50" Dry Cans
1 Birch Bros. Scutcher & Vacuum 60"

SILK THROWING MACHINERY

5 Atwood 5B Twisters
9 Atwood Single Deck Utility Spinners
30 Universal Coners #50
8 Sipp Warpers & Winders
20 #90 Universals
4 Oswald-Grundy 46—Spindle Cop Winders

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1050 Wors. Drawing Bobbins—9 x 14
515 Wors. Drawing Bobbins—8 x 14
100 M. A. L. Bobbins 8¾" Wool
375—Jack Spools, 56" x 10"
500 M—Flat Steel Heddles 10"—12"
50 M Doupe Heddles—12"
Large Lot Ratchet Pick Gears, 10"
Lot of Worsted Temple parts (new)
1 Million Draper Drop Wires, .008
12 Automatic Looms, 82" C&K
2—J & B Jack Winders, 96 ends

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Repeaters, Lacers, Card Cutters, Jacquards of all description. Steel Heddles & Linqoes. Quilling Machines No. 10.

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Vacuum Cloth Extractor

One Gessner 68" L.H. vacuum cloth extracter complete with pump and motor—excellent condition—immediate delivery.

ROCK RIVER WOOLEN MILLS
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USED EQUIPMENT AVAILABLE IMMEDIATELY

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3—26E HUNTER FULLING MILLS

Quadruple Roll—4 String
Chrysler Rubber Covered Steel
Sectional Fulling Rolls
Approx. 6½' W x 10' F to B x 7' D
Wood with Stainless Steel Box or Throat
Year 1943-41—Used very little
Complete with V-belt & Clutch Drive
Including 40 HP motors

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12 WORSTED COMBS

All Rebuilt by James Smith
65" Rock—Pinning 45-49

Item H-WC54

2 WORSTED CARDS

Davis & Furber
54" Diameter x 54" Face
Bramwell Feed
Balling Head Delivery

Item BE-PDK

7 RODNEY HUNT WOOD PIECE DYE KETTLES

Stainless Steel Lined and Fittings
69" W x 88" F to B x 59" D
Includes Motor and Drive

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Vacuum Pumps

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RENT—SELL—BUY

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Special 5 Available
I.R. Dry Vacuum Pumps
250 CFM
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Type 15

FOR RENT—ANY ONE OF OVER 200 COMPRESSORS IN STOCK

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AMERICAN AIR COMPRESSOR CORP.

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FOR SALE

2 ROLL CLOTH CALENDER

66" face, 20 H.P., 220V, 3 phase motor and drive. 12" cored steel roll, 24" husk and cotton roll. Motorized screw loaded. Now operating.

CRAWFORD MFG. CO. INC.
Richmond, Virginia

FOR SALE

1—S.L. Cotton Slasher 2 Cyls. 5' and 7"
6—Luther Dressing Machines
8—2 Spindle Intersecting Gill Boxes 14x9
1—4 Spindle Intersecting Gill Box 14x3
11—10 & 12 spdle. Draw Boxes 14x9, 4" F.R. 1948
4—24, 28 and 32 Spdle. Draw Boxes 12x6, 4" F.R.

JAMES SPEED & COMPANY
522 Andover St., Lawrence, Mass.

. . WE OWN AND OFFER FOR SALE . .

SPECIALISTS IN REBUILDING & RECONDITIONING LOOMS

LIQUIDATING COMPLETE PLANT

14—C&K, 4x1, 52" Reedspace Looms
68—C&K, 2x1, 52" Reedspace Looms
6—C&K, 2x1, 54" Reedspace Looms
9—#90 Universal Winders
5—#90 Universal Winders with Bunch-builders
1—72" Sipp Warper
1—83" Sipp Warper
4—120 Spindle Sipp Winders
1— 80 Spindle Sipp Winder
1—Blake Measuring Machine, 58" Drum
1—Hermas Measuring Machine, 58" Drum

Looms are non-automatic and are equipped with feelers, pick clocks, warp stop motions, let-offs, beams, ½ HP, 3/60/220 motors.

20—60" Reedspace C&K 4x1 Looms, 20 Harness Dobby, Side Center Filling Motion, Plain Bearing, 2 shift pick counters, individually motor driven.
13—C&K 2x1 50" Reedspace oversize shuttle box, individually motor driven, 20 hook double index dobbys, 2 shift pick clocks, 1½ beams per loom.
9—C&K 2x1 52" Reedspace, oversize shuttle box, individually motor driven, 20 hook double index dobbys, 2 shift pick clocks, 1½ beams per loom.
20—60" Reedspace C&K Plain looms, 20 harness double index dobby, plain bearings, 2 shift pick counters, motor driven.
2—20 Spindle Oswald Lever Back Winders.
4—2600 Hook Jacquard Machines—only.
10—600 Hook Jacquard Machines.
26—#90 Universal Quillers and Coppers with and without bunchbuilders, excellent condition.
2—Measuring Machines 40" and 58" goods.
8 Yard Sipp Warpers, 83" and 72" Skein Winders, 60, 80, 100 spindles.

7—½ H.P. 220 Volt, 60 cycle, 3 phase 1800 R.P.M. General Electric Motors
46—½ H.P. 220 Volt, 60 cycle, 2 phase 1800 R.P.M. General Electric Motors
9—½ H.P. 220 Volt, 60 cycle, 3 phase 1800 R.P.M. General Electric Motors
4—½ H.P. 440 Volt, 60 cycle, 3 phase 1800 R.P.M. Rewound Motors
6—½ H.P. 550 Volt, 60 cycle, 3 phase 1800 R.P.M. General Electric Motors
17—¾ H.P. 220 Volt, 60 cycle, 3 phase 1200 R.P.M. New Tri-Clad General Electric Motors.
3—¾ H.P. 440 Volt, 60 cycle, 3 phase 1800 R.P.M. Rewound Motors
25—1¼ H.P. 550 Volt, 60 cycle, 3 phase, 1800 R.P.M. General Electric Motors

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17—30" dia 50" face copper dry cans.
9—23" dia 45" face copper cans.

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New and Used Finishing Machinery
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Fall River, Mass.

PREPARATORY

2—48" Pit Feeds
1—Harwood 48" Mtr. Dr. Picker Feed
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3—Schofield 48" automatic Duster (box)
1—Woonsocket 36" x 36" ceiling condenser & blower
1—D. & F. 48" Fearnaught Mixing Picker
1—D. & F. 40" Mixing Picker, 6 bar
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2—Tolhurst 48" S/S Extractors (New)
1—Small Combing Plant, Worsted (2 cards, 2 combs, etc)
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1—Draper 2½", 200 Sp. Novelty Twister.

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4—D. & F. or Altemus Warpers—rebuilt to order—82"—120", Pin or Pinless
1—Entwistle Hi Speed 54" Beamer & Creel
1—Globe Ball Warper & Creels
2—Altemus Long Chain Beamers
24—C. & K. W2, 52" 4x1 Looms
4—C. & K. 92" 4x1 automatic Looms
4—C. & K. 52" 4x1 automatic Looms
12—C. & K. 52" (4x4) Box Looms
2—L. & G. Chenille Cutters
1—Terell Mod. K Bobbin Stripper

WINDING

UNIVERSAL #50 & #90 WINDERS REBUILT TO ORDER

1—Universal 80 G.P. 96 sp. Cone Winder
1—Foster, Mod. 101, 100 sp. Cone Winder
1—Foster Mod. 12, Skein to cone Winder, 80 sp.
2—J. & B. Jackwinders, 80 sp. & 120 sp.
10—Lindsay-Hyde Adjustable Skein Reels
2—Whitin Quillers 2½" Gauge (long chain)
1—Lasenby 15 sp. Cop Winder

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1—Hunter No. 16 Fulling Mill
2—Birch Bros. Doub. & Tacking Mach.
1—Woonsocket 84" D. A. Napper, 38 rolls
1—P. & W. 66" 4 cyl. Brush & Sander
2—Tenale Gig's, double cylinder
2—Rope Soaping Machines (lead lined)
1—Yorkshire Crab 72"—3 bowl
1—S/S Lined 68" Wetting-out Tank with squeeze rolls
2—P. & W. 66" Mod. A Double Shears
2—Voelker 65½" D. B. Presses
2—P. & W. 60" Semi-Decaters
1—Set Dry Cans (4) 40"
1—P. & W. Lancashire 93" Cloth Boarding Machine
1—Windle 66" Cloth Doubler & Meas. Mach.
2—P. & W. 66" Cloth Doub. & Meas. Mach.
1—Windle 66" Cloth Roll. & Meas. Mach.

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4 64" Uholstery Looms
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20 Atwood Redraws—Gate Tensions—Accommodates 5" Head.
8 Atwood 5 B—for Silk—Motorized.
1 Terrell Bobbin Cleaner.
1 Whitin D.D. Uptwister—H'dless Pkg.
30M Spinner Spools—4½" T. x 3¾" H.
80M 7" Paper Cops with Metal Feelers—Thin Lip—Like New.
60M Fibre Winder Spools 3¼" T. x 3" H.
12M Take Ups-3⅜" T. x 3¼" H. S.S.
12M Fibre SH.P. Spools—5½" T. x 3" H.
6M Fibre Twist. Spools—4" T. x 3⅛" H.
12M All Wood Spools—6" T. x 4" H.
2M Metal Bobbin & Cone Trays.

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1—R. B. & F. 6-Color 44" Print Machine with Cans
1—Textile Tenter, 30' Long for 100" Cloth
1—Curtis & Marble 60" Inspector and Tuber
1—Johnson 5-Cylinder 66" Rayon Slasher
1—Tomlinson Single Cylinder Waste Machine
1—Foster Model 103 Cone Winder
1—Barber-Colman Model "K" Tying-In Machine

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EXCELLENT FINISHING MACHINERY FOR SALE AT LOW PRICES

Rubber Rolls, Calender Rolls, Steel Rolls
78" Brass Scutcher
1—1000 lbs. Toledo Scale
1—24 Reeves D.S. Drive
1—108" Swing Folder
1—25 HP Angle Drive Steam Engine
1—Book Dryer, 7 Copper Cans Tinned 39" Diam. x 48" wide
1—42" 3 Roll Watermangle, 2 Husk 1 Brass Rolls
43—60" COPPER DRY CANS First Class Condition
1—2-Roll Bleachhouse Squeezer
2—St. Steel Lined Jigs 50" Wide
1—Stainless Steel Self-Supporting Jig 60" Wide
1—36" Hydro Extractor, Hercules with Motor 220V, 3-60 Brass Basket.
1—1 H.P. El. Hoist 550 V. 3 P.H. 60 cycles
1100—Butterworth #99 Top List Tenterhooks excellent condition
1—32" Face Narrow Ribbon and Narrow fabric finishing machine complete with quetch

Wire—Write—Phone

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TEXTILE FINISHERS EQUIPMENT
144 WEST RIVER ST.
PROVIDENCE, R. I.

The Dacron Story

(*Continued from page 113*)

sistance, the suits of Dacron would be expected to have good wear life. This is being confirmed in wear tests. A suit made from a 7.5-oz. tropical fabric of Dacron that has been worn 250 days showed practically no signs of wear. The suit was dry cleaned five times, and in addition the trousers were washed ten times.

Dacron in Blends

While Dacron will be used alone in outerwear, it will also contribute significant functional properties in blends with other fibers. In this way, each fiber will be engineered to make its particular attributes most effective.

Considerable work has been done on blends of Dacron with wool and with rayon. The maximum resistance to wrinkling and crease retention under hot, humid conditions is illustrated by a suit of 100% Dacron. Improvement of the wrinkle resistance and dimensional stability of worsted suits under hot, humid conditions is represented by a suit made from a blend of 50% Dacron and 50% wool. For suits of lower cost that give satisfactory performance, a blend of Dacron with rayons or cotton is recommended.

The first commercial suiting fabric from Dacron was made just about one year ago. However, there is still a lot of work to be done. For example, more consideration must be given to ways to overcome pilling. In one suit of Dacron, pilling was minimized by high twist in the yarn, tight construction of fabric, and the use of sanding, shearing, and singeing in the finishing operation.

The low electrical conductivity (low moisture content) of Dacron presents a static problem in 100% fabrics for winter use. This problem may be overcome by the use of blends of Dacron with other fibers and by the use of antistatic agents in dry-cleaning fluids or rinsing water. Another approach under investigation is permanent antistatic agents.

A suit of Dacron is susceptible to the melting of holes in the fabric by burning tobacco. Work initiated to minimize this problem has already demonstrated that certain resins greatly retard melting without hurting hand or wrinkle resistance. Also, this problem is reduced significantly by blends with other fibers, notably blends with viscose rayon.

Suits of Dacron polyester fiber will require special attention in manufacture by procedures employed for trop-

(*Continued on page 314*)

PRINTING MACHINES

1—Rice, Barton & Fales Print Machine, 13 colors, 44" width
1—Textile Machinery Co. Print Machine, 14 colors, 45" wide
1—Rice, Barton & Fales Print Machine, 12 colors, 50" wide
2—Rice, Barton & Fales Print Machine, 10 colors, 44" wide
1—Franklin Machine Co. Print Machine, 9 colors, 60" wide
1—Franklin Machine Co. Print Machine, 9 colors, 48" wide
2—Rice, Barton & Fales Print Machine, 8 colors, 60" wide
1—Rice, Barton & Fales Print Machine, 8 colors, 50" wide
1—Rice, Barton & Fales Print Machine, 8 colors, 64" wide
1—Rice, Barton & Fales Print Machine, 7 colors, 45" wide
1—Rice, Barton & Fales Print Machine, 6 colors, 45" wide
1—Rice, Barton & Fales Print Machine, 5 colors, 42" wide
1—Rice, Barton & Fales Print Machine, 8 colors, 48" wide
1—Rice, Barton & Fales Print Machine, 3 colors, 57" wide

RESIDUAL SHRINKAGE CONTROL RANGE

Dalglish Pin Tenter Frame 100' long x 60" wide, Proctor & Schwartz 80' housing, Morrison Micro-Set Padder, 60", Proctor & Schwartz Cure Loop Dryer. Age 1947.

Dyeing & Finishing Machines

2—Textile Agers, 20' long, 56" wide, M.D.
1—Van Vlaanderan Tenter Frame 90' long x 60" wide, w/Nat'l housing 40' long
1—Windsor & Jerauld Tenter Frame 60' long x 70" wide, M.D.
2—Butterworth Tenter Frames, 30' long x 70" wide, M.D.
1—Van Vlaanderen Hydr. Calender, 50", 3 rolls, 80 ton, M.D.
1—Van Vlaanderan Calender, 50", 2 paper, 1 steel roll, M.D.
10—Van Vlaanderan Stainless steel dye jiggs, 50" & 70" wide, tensionless, M.D.
1—General Decatizer, 52" wide, double cylinder, M.D.
1—Hinnekins Pneumatic Padder, 60" wide, 3 rolls, 12 ton, M.D.
1—Verduin Hydraulic Padder, 50" wide, 2 rolls, 12 ton, M.D.
1—Hercules Centrifugal Extractor 60", M.D.
2—Van Vlaanderan Palmers, 64" wide x 60" dia. w/quetches
1—Van Vlaanderan Palmer Tenter Unit 60" x 60", tenter 50" x 50'
1—Hinnekens Padder, 52" wide, 2 rolls, M.D.
2—Van Vlaanderan Net Conveyor Dryers, 30' long x 60" wide, M.D.
4—Copper jacketed Mixing Kettles, 50 gallons & 100 gallons

Weaving Machines

400—Crompton & Knowles automatic looms, 40" cloth, 4 x 1 box motors, M.D. large amount of supplies.
50—Draper Model E, 52" cloth auto. looms, 2 harness, M.D.
150—Draper Model X' 52" cloth automatic looms, M.D.

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1—W.J. Tenter Frames, 30' x 96"
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1—VV Emboss. Cal. 36" Max.
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1—VV Decatizing Mach.
1—48" Tolhurst Cop. Basket Extractor
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12—C&K Terry Towel 42" Looms
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15—Draper XK 44" Cloth Looms, Mtrs
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1—Barber Coleman Warp Tying-In Mach.
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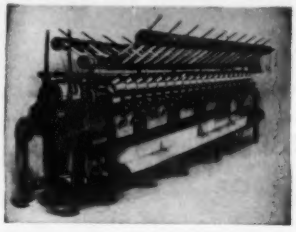

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Pickers, Twisters, repair parts for woolen machinery cylinders, workers, strippers aprons and Barker condenser parts.

(Continued from page 312)

ical worsteds. Modified assembly lines will be required to fabricate suits of Dacron polyester fiber. Creases must be placed in the fabric at a low enough pressure and temperature so that the fabric is not glazed and so that the suit may be altered at the point of sale. Once again, the blending of wool or viscose eliminates the need of special equipment, since the blend permits the fabrication of suits on standard assembly lines.

Dyeing

All of the new fibers seem to have their dyeing headaches, and Dacron is no exception. A good job can and is being done, but the job of dyeing is not easy. Special techniques, such as the use of selected dyeing assistants and dyeing for long periods at the boil, are required. Light fastness of the order required for specific end uses has been obtained. Furthermore, dyestuff and procedure developments now in progress promise very outstanding light fastness in a complete range of colors. Wash fastness of dyes is generally excellent on Dacron. The dye is hard to get on, but once on, it is hard to wash off.

Other Markets

Aside from the natural potential of Dacron in suitings, topcoatings, slacks, and overcoatings, here is a brief look at other potential markets other functional properties of Dacron that appear to be of value to the textile industry.

KNITTING YARNS

One of the properties of knitting yarns of Dacron polyester fiber is the excellent elastic recovery that promotes good shape retention in sweaters and hose. The knitting yarns are also characterized by a warm and lofty texture. In general, it may be said that fabrics knitted or woven of Dacron have a pleasant textural hand.

CONTINUOUS FILAMENT

Dacron will also find a market as a continuous-filament yarn because of its excellent functional properties. The very same properties of wrinkle resistance, economical maintenance, and dimensional stability that make Dacron polyester fiber outstanding in staple applications will also make it stand out in continuous-filament fabrics.

The most important functional properties that Dacron is contributing to blouses, shirts, dresses, ties, lingerie, and other wearing apparel are muss resistance and a neat appear-

(Continued on page 316)

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7 cans—52" complete with brown instrument panels.

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80 Atwood Monarch type double deck spinners, motorized, 184 spindles each, complete excellent condition.
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1—D&F Pin Type Dressing Frame, 120", Wooden Spool Rack, Neck Reed and Black Stand and Jack Shaft, B.D.
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TEXTILE WORLD

(*Continued from page 314*)

ance through continued wear.

The "go-home" appearance of a woman's blouse of Dacron is essentially the same as the "come-to-work" appearance. The blouses require little or no ironing. When ironing is needed, it is easily and quickly done.

The same comments may be applied to men's shirts. The shirts may be worn and washed without ironing after each washing. In most cases an occasional touch-up with an iron, set at rayon-ironing temperature, is recommended to maintain the original neat appearance of the shirt. This is also true of shirts made of staple, such as one shirt that has been worn 45 days, hand washed 45 times, ironed twice.

INDUSTRIAL USES

Dacron polyester fiber is proving to be successful for use in industrial products as well as in wearing apparel.

In fire hose, the high tenacity and high stretch resistance of Dacron are utilized. Fire-hose fabric made with a conventional cotton warp and a filling of Dacron is, in comparison with a conventional cotton warp and filling hose, 50% stronger, 20% lighter, smaller in diameter, and more flexible. A fire department reports it now carries with the new hose a length of 1,300 ft., whereas formerly it could carry only 900 ft. on a fire truck.

V-belts and ropes also utilize to advantage the high-tenacity and high stretch resistance of Dacron polyester fiber. In laundry nets, the high bleach resistance of the fiber is proving important, and in laundry press cloths the high heat resistance of Dacron offers a valuable functional property. Sail cloths of Dacron demonstrated their value in the Bermuda races last summer. Here the new fiber was used because of high strength and stretch resistance, little "come and go" with changes in relative humidity or rain, and good resistance to rot and mildew when stored under wet conditions.

CURTAINS AND SEWING THREAD

These two uses may be looked upon as in the category of essentially proven markets for Dacron. Curtains have good texture, dimensional stability with changes in relative humidity, ease of washing, the need of little or no ironing, and good resistance behind glass to degradation by sunlight.

Sewing thread of Dacron is characterized by high stretch resistance, high strength, dimensional stability in wearing and washing, and good durability. This thread gives good sewing efficiency and performance; it is operated on standard sewing machines with a minimum of adjustments.

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1—56" 2-Roll Morrison Padder
1—4-Roll 41" Calender, K. & G.
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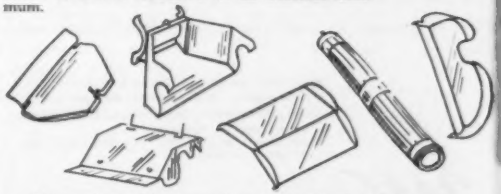

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TEXTILE WORLD

JUNE, 1951

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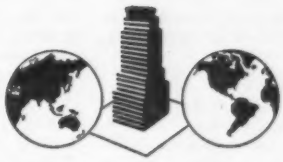

▸ Brief Summaries in Spanish, French, and German of the Major Feature Articles in This Month's Issue

Español

Hemos añadido este suplemento a la edición completa de TEXTILE WORLD de los Estados Unidos en beneficio de nuestros estimados lectores del extranjero. En las columnas siguientes encontrará usted información sobre los artículos importantes que aparecen en las páginas de este número – información que puede ayudarle a aquilatar cada uno de los artículos originales sacándoles mayor provecho en su uso individual.

TEXTILE WORLD espera que estas traducciones breves, al idioma que es más familiar para usted, le sirvan de guía para decidir usted mismo cuáles artículos le conviene traducir por su propia cuenta, dado su interés especial en las diferentes fases de nuestra gran industria textilera mundial. Esas traducciones serán de gran valor práctico para aquellas personas de su organización que tengan dificultades con la terminologia de tejidos del idioma inglés.

Véase la página 3 de las hojas corrientes de este número para la relación completa del contenido en inglés.

Français

Ce supplément a été ajouté à notre édition régulière américaine à l'intention de nos estimés clients d'outre-mer. Dans les colonnes qui suivent vous trouverez des renseignements concernant les articles principaux de ce numéro, renseignements qui vous permettront de juger le l'intérêt que ces articles peuvent avoir dans votre cas particulier.

TEXTILE WORLD espère que ces résumés présentés dans une langue qui vous est plus familière vous permettront de décider quels sont les articles qui vous intéressent suffisamment pour que vous les fassiez traduire plus en long par un traducteur de votre ville. Ces traductions seraient utiles aux membres de votre firme non familiarisés avec la terminologie anglaise de l'industrie textile.

Consultez aussi la Table des Matières, page 3 de ce numéro.

Deutsch

Diese Beilage wurde der vollstaendigen Vereinigten Staaten Ausgabe der TEXTILE WORLD zur Erleichterung fuer unsere geschaetzten Leser in Uebersee zugefuegt. In den nachfolgenden Spalten werden Sie von den wichtigsten Fachaufsaetzen, die in diesem Heft erscheinen, in Kenntnis gesetzt, um Ihnen in der Auswahl der Original Aufsaetze, die fuer Sie von besonderem Interesse sind, behilflich zu sein.

Die TEXTILE WORLD hofft, dass Sie sich durch diese kurzen Uebersetzungen in eine Sprache mit der Sie vielleicht mehr vertraut sind, veranlasst fuehlen, Fachaufsaetze, die von besonderen Interesse auf dem Gebiet der grossen und weltumspannenden Textil Industrie sind, bei lokalen Uebersetzern ausarbeiten zu lassen. Solche Uebersetzungen waeren von praktischem Wert fuer diejenigen in Ihrem Unternehmen, die Schwierigkeiten mit englischen Fachausdruecken haben.

Siehe Seite 3 der Original Ausgabe fuer das vollstaendige Inhaltsverzeichnis in englischer Sprache.

Página 103

Un Modelo de Plástica Puede Resolver Problemas de Proyección de Fábrica. Este artículo informa cómo una gran planta textilera utiliza un modelo de plástica de la planta y del equipo para ayudar en el estudio y en la distribución del equipo; para explicar la operación y los detalles de la elaboración a los que no estén familiarizados con la distribución de la planta; y para resolver los problemas de movimiento de materiales en general, manipulación y almacenamiento.

Página 104

Regulación Uniforme del Telar para Sarga de 18 Oz. Para los que tejen sarga de 18 onzas para el gobierno, la apariencia uniforme es esencial. Este

Page 103

De l'emploi de modèles miniatures, faits à l'échelle, pour l'étude préalable d'une usine. Cet article explique comment une grande usine d'apprêt et de finissage emploie un modèle miniature de l'usine et des miniatures de son matériel pour étudier les changements d'emplacement et de successions d'opérations. Le système est utilisé également pour expliquer les méthodes de travail à ceux peu familiarisés avec elles; ainsi que pour étudier certains problèmes de routage de la marchandise, de sa manutention et de son entrepôsage endéans l'usine.

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Réglage standard pour serges de 18 onces. Un tissu d'aspect uniforme est

Seite 103

Plastisches Modell einer Fabrik kann Produktionsprobleme loesen. Dieser Artikel zeigt, wie eine grosse Textilfabrik ein in einem gewissen Maassstab gebautes Modell der Fabrik und der Maschinenanlage als Behelf verwendet, um eine Umgruppierung des Maschinenparkes zu studieren und zu besprechen; um Fabrikations- und Arbeitsvorgaenge detailliert jenen zu erklaeren, die nicht mit der Fabrikationsanlage vertraut sind; um Fabrikationsprozess, Handhabung und Einlagerungsprobleme greif- und sichtbar vor Augen zu fuehren.

Seite 104

Einheitliche Einstellung der Webstuehle fuer 18-Unze Serge. Fuer Fabriken

artículo indica la importancia de la regulación uniforme de los templazos, bielas, lizos, y de los mecanismos de paro de urdimbres y lizos, así como de los rodillos tensores; y ofrece los métodos adecuados para graduar estos ajustes para producir los géneros requeridos.

Página 106

Estudio sobre Métodos de Hilatura, Encarretado y Regulación. Este informe sobre una reunión reciente de los Ejecutivos de Operaciones Textileras de Georgia comprende discusiones de los temas siguientes: Hilatura de gran estiraje; limpiadores debajo de la continua de anillos; mecanismos plegadores automáticos; cilindros superiores metalizados o cromados; silletas de nilón y guías de cilindro sin engrase; selectores de rollos neumáticos; tuberías de los husillos antifricción; conversión a grandes bobinas de urdir; reducción del hilo suelto en los encarretadores; y regulación de cintas, mechas y peso del hilo.

Página 112

Datos sobre el Dacron. Las propiedades funcionales principales del Dacron, una nueva fibra poliester (anteriormente Fibra V) de la E. I. du Pont de Nemours & Co., son: gran elasticidad, estabilidad dimensional, alta resistencia al alargamiento y gran resistencia contra el calor. Su uso más apropiado es en géneros para trajes. La fibra puede usarse también en mezclas, hilos de tejer, telas de filamento continuo, usos industriales, telas para cortinas e hilos de coser. Hasta 1953 no se podrán obtener cantidades en escala comercial.

Página 114

Conservación del Telar en Optimas Condiciones. En este artículo un observador experto de sala de tejedura da consejos sobre cómo él mantiene sus telares en las mejores condiciones posibles en todo momento. Las etapas primordiales del programa son buena inspección, buen fijado y buen engrase. El autor muestra cómo pueden obtenerse beneficios en los costos de operación y en la calidad de tela por medio de buenas costumbres en la tejedura. En los pies de grabado que acompañan a las ilustraciones se ofrecen los puntos particulares que causan dificultades.

Página 116

Limpia y Eficiente Planta Generadora de Vapor de Encendido a Carbón. La planta Stevens de la Graniteville Co., de Graniteville, S.C., está proyectada para realizar todas las operaciones. desde el abastecimiento del carbón a la disposición final de la ceniza, tan automáticamente como es posible hacerlo. Las calderas, funcionando con

Page 106

Échanges de vues concernant la filature, le bobinage et les systèmes de contrôle. A l'occasion d'un meeting du personnel dirigeant d'usines textiles de la Géorgie, les sujets suivants furent discutés: grands étirages, nettoyeurs du dessous des bâtis; mouvement automatique de formation de la bobine; chromage ou métallisation des cylindres de pression; sellettes en nylon; supports de cylindres non huilés; nettoyage pneumatique des cylindres; réglage au fil à plomb des broches anti-friction; emploi de grosses bobines d'ourdissage; réduction de fil défectueux au bobinage; contrôle du poids des rubans, mèches et fils.

Page 112

Caractéristiques de la Fibre Dacron. Les principales caractéristiques de la nouvelle fibre Dacron, un polyester connu antérieurement sous le nom de Fibre V et qui est fabriquée par E. I. du Pont de Nemours & Co., comptent entre autres sa propriété de regagner facilement ses dimensions originales, une stabilité très caractéristique de ses dimensions, une grande résistance à l'étirage ainsi qu'à l'action des températures élevées. Son usage est évidemment tout indiqué dans les tissus de vêtements. La fibre peut aussi s'employer dans des mélanges, pour fils à tricoter, dans les tissus à filaments continus, en tissus à usages industriels, tissus de rideaux et en fils à coudre. Le fil ne sera pas produit en quantités commerciales avant 1953.

Page 114

Gardez vos métiers en parfait ordre de marche. L'auteur, un chef d'atelier de première force, explique comment il garde ses métiers constamment en parfait état mécanique. Les facteurs essentiels résident dans la qualité de l'inspection, du réglage et du graissage. L'article expose également les avantages en réduction de prix de revient et en qualité des tissus que des règles et un système de tissage bien étudié peuvent produire. Le titre de chacune des illustrations expose une des difficultés que l'on rencontre en tissage.

Page 116

Chaufferies au charbon, propres et à rendement élevé. L'usine Stevens de la Graniteville Co. à Graniteville, Caro-

welche 18-Unze Serge fuer die Regierung weben, ist das glichmaessige Aussehen des Fertigproduktes wichtig. Dieser Artikel hebt die Wichtigkeit der einheitlichen Einstellung der Breithalter, der Schubstange, des Webgeschirres, der Kettenfaden- und Schaftabstellvorrichtung, und des Streichriegels hervor, und fuehrt richtige Methoden zum adjustieren dieser Einstellungen an, um die erforderliche Ware zu erzeugen.

Seite 106

Diskussionen ueber Spinnen, Spulen und Kontrollgebraeuche. Dieser Bericht ueber eine unlaengst stattgefundene Zusammenkunft der Betriebsleiter von Georgia enthaelt Diskussionen ueber die folgenden Angelegenheiten: Hochverzug-Spinnen, Putzmaschinen fuer Untergestellrahmen, automatisches Schaltgesperre, Metall- und Chrom ueberzogene Druckwalzen, Nylon Buegeln und schmierungslose Zylindertraeger, Druckluft Pickerwalzen, Bleiarbeit an reibungslosen Spindeln, Konversion zu grossen Kettengarnbobbinen, Vermeidung von "Garnbruechen" an Spulmaschinen, und Kontrolle des Streckbandes und des Garngewichtes.

Seite 112

Diskussion ,ueber "DACRON." Die hervorstechenden Eigenschaften von "Dacron," der neuen Polyester-Faser (frueher Faser "V" genannt) von E. I. du Pont de Nemours & Co., sind u.a. grosse Elastizitaet, dimensionale Stabilitaet, hoher Dehn- und Waermewiderstand. Der natuerlichste Gebrauch ist fuer Bekleidungszwecke. Diese Faser kann auch in Mischungen, Strickgarnen, fortlaufenden Faserprodukten, industrielle Zwecke, Vorhangstoffen und fuer Naehzwirne verwendet werden. Quantitaeten fuer den Handel werden vor 1953 nicht zu haben sein.

Seite 114

Instandhaltung von Webstuehlen in gutem Betriebszustand. In diesem Artikel gibt ein erstklassiger Webereimeister Richtlinien, wie er seine Webstuehle immer im bestmoeglichstem Zustand haelt. Wichtige zu befolgende Punkte in diesem Programm sind: Gute Aufsicht, gutes Regulieren, und gutes Oelen. Der Autor beweist, wie gute Webgepflogenheiten Arbeitskosten und Warenqualitaet vorteilhaft beeinflussen. Spezielle Hinweise auf Dinge, die Unannaehmlichkeiten verursachen, werden in den Aufschriften, die den Abbildungen beigefuegt sind, hervorgehoben.

Seite 116

Reine und wirksame Kohlengeheizte Dampferzeugungsanlage. Die Stevens Fabrik der Graniteville Co., Granite-

cargas máximas hasta de 3.800.000 libras de vapor por día, están reguladas de manera tal que se mantiene óptima eficiencia aun durante las variaciones de carga. La manipulación neumática de la ceniza y una rociadura de agua en el silo de cenizas evitan que el polvo vuele.

Página 118

Conservación Organizada de la Sala de Cardas. La verdadera conservación está en la prevención, al igual que en las reparaciones, de las roturas. La elección correcta y la aplicación adecuada del lubricante reducirá grandemente los paros de las máquinas y su desgaste. Se descubrirán muchas faltas si se mantienen datos de las velocidades correctas y de los ajustes establecidos para el equipo, y si se realizan inspecciones periódicas de las máquinas. También es importante la limpieza apropiada y los programas para remoción des desperdicios.

Página 120

Exposición de Tejidos en Atlantic City. Los acontecimientos importantes en el ramo de tejidos, dados a la publicidad por vez primera en la Exhibición del Arte de la Hilatura el mes pasado, comprendieron una retorcedora de paso ascendente de tres puentes; una tricotosa rectilínea del tipo de raschel; máquinas para tejer medias para las fuerzas armadas y otros muchos dispositivos mejoradas para remendar. En el ramo de motores, varias compañias exhibieron nuevas propulsiones de máquinas de tejer para arranque más suave, cambios instantáneos de velocidad y paradas más suaves.

Página 135

Elaboración Continua de Telas Revestidas de Vínilo. Este artículo indica cómo la planta Woodhead, de la Graniteville Co., ha desarrollado por medio de la ingeniería y la investigación, el equipo y los métodos necesarios para trabajar telas revestidas de vínilo. Los métodos no tan solo aseguran el mínimo de paradas en el alcance continuo, sino que también regulan las temperaturas y el flujo de aire en la elaboración; usando también con mayor provecho el aire calentado.

Página 139

La Mezcla de Fibras se Hace Mejor Mecánicamente. Los trenes mezcladores mezclarán fibras abiertas, con gran satisfacción, por la edición simultánea de pequeños aumentos proporcionados de material pesado automáticamente. El autor muestra cómo una fábrica de géneros de lana, algodón o rayón obtendrá mejores mezclas y hará economías de $32.000 y $12.500, respec-

line du Sud, à été construite pour permettre un automatisme aussi complet que possible des opérations de chauffage, de l'amenée du charbon à l'enlevage des cendres. La demande et consommation de vapeur s'élèvent à un maximum de 3,800,000 livres anglaises par jour, et les chaudières sont réglées pour travailler avec un rendement optimum même pendant les périodes de variations prononcées. La manutention pneumatique des cendres et l'aspergeage des réservoirs contenant les cendres réduisent la poussière au minimum.

Page 118

Entretien des salles de carde. Le principe essentiel d'entretien consiste à prévenir les difficultés mécaniques et non pas seulement à procéder aux réparations lorsqu'elles sont nécessaires. Un choix judicieux de l'huile la mieux appropriée dans chaque cas et de son application correcte réduiront les causes d'usure et d'arrêt. Une étude et des instructions précises concernant la vitesse et les tolérances de réglage, de même que des inspections à intervalles réguliers, contribueront à decouvrir à temps des sources d'ennui. Le nettoyage des machines et l'enlevage des déchets doivent se faire à dates fixes.

Page 120

Exposition du matériel de bonneterie à Atlantic City. Parmi les machines de bonneterie exposées pour la première fois à l'Exposition du Matériel de Bonneterie, on remarqua tout particulièrement une retordeuse à trois étages retordant vers le haut, un métier chaîne genre Rachel, des métiers à tricoter les chaussettes militaires et différents appareils spéciaux pour remaillage. Dans le domaine de la commande électrique, on remarqua des commandes permettant des démarrages moins brusques, des changements de vitesse instantanés et des arrêts moins brutaux qui furent présentés par divers constructeurs.

Page 135

Traitement continu de tissus recouverts de Vinyl. L'article décrit comment l'usine Woodhead de la Graniteville Co. est arrivé à produire du matériel et des méthodes de production pour enduire les tissus avec du Vinyl. Cette nouvelle technique permet non seulement de produire avec un minimum d'arrêt du matériel, mais assure aussi un contrôle de la température et de la soufflerie d'air, tout en utilisant cet air avec le maximum d'efficacité.

Page 139

Le mélange des fibres par systèmes automatiques s'avère le meilleur. Des mélangeuses montées en série feront

ville, S. C., ist derart entworfen, dass alle Operationen, angefangen von der Kohlenzufuhr bis zur Aschenvernichtung, so automatisch als moeglich vor sich gehen. Arbeiten mit Hoechstladungen bis zu 3,800,000 Pfunde Dampf per Tag, verlangen, dass die Kesseln so reguliert werden, dass die Hoechstleistung sogar waehrend der Zeit der geringeren Arbeitsbelastung unveraendert aufrecht erhalten wird. Pneumatische Aschenentfernung und eine Aschenspeicher - Wasserberieselungsanlage haelt die Staubentwicklung unter Kontrolle.

Seite 118

Planung der Krempelraum-Instandhaltung. Richtige Instandhaltung ist eine Vorbeugungsmassnahme gegen Reparaturen und Zusammenbruechen. Korrekte Auswahl und Anwendung von Schmierfetten vermindert Maschinenstillstaende und Abnuetzung. Ein Verzeichnis der richtigen Geschwindigkeiten und Einstellungen der Maschinen und regelmaessige Routine-Inspektion helfen viele Fehler zu entdecken. Ein Plan fuer zeitgerechte Reinigung und Abfallsentfernung ist wichtig.

Seite 120

Strickereimaschinen Ausstellung in Atlantic City. Unter den hervorzuhebenden Neuerungen im Strickereimaschinenfeld, die im letzten Monat zum ersten Male bei der Strickkunstausstellung gezeigt wurden, sind u.a. ein 3-Etagen Zwirnmaschine, eine Raschel-Typ Trikotmaschine, Maschinen zum Stricken von Militaersocken und viele verbesserte Ausnaehvorrichtungen. Auf dem Motorengebiete brachten mehrere Firmen neue Strickmaschinen-Antriebe fuer leichteres Anlassen, sofortige Geschwindigkeitsveraenderungen und glatteres Abstellen heraus.

Seite 135

Fortlaufender Prozess von Vynil ueberzogenen Fabrikaten. Dieser Artikel hebt hervor, wie die Woodhead Fabrik der Graniteville Co., durch wissenschaftliche und praktische Versuche, eine Maschinenanlage und eine Fabrikationsmethode ausgearbeitet hat, um mit Vynil ueberzogene Fabrikate zu behandeln. Die Methode sichert nicht nur einen Bruchteil von Unterbrechungen in der ununterbrochenen Erzeugung zu, sondern kontrolliert auch die Temperatur und die Luftzufuhr waehrend des Arbeitsvorganges, wobei gewaermte Luft zum bestem Vorteil verwendet wird.

Seite 139

Fasermischen geschieht am besten mechanisch. Mischungsleitungen blenden gruendlich die geoeffneten Fasern un-

tivamente, utilizando la mitad de las horas necesarias anteriormente con otros méthodos mezcladores, con el uso de la alimentación y mezcladura automáticas.

Página 143

El Diseño de la Planta Reduce los Costos de Acabado. El autor, para demonstrar cómo el buen diseño de una planta puede reducir los costos de conservación y de funcionamiento en el futuro, trata detalladamente en este artículo sobre la importancia de elegir el lugar para la planta; cómo diseñar el edificio para adaptarlo al proceso, no a la forma de la propiedad; cómo usar nuevos y mejores materiales para reducir los costos futuros de mantenimiento; cómo proporcionar los requisitos adecuados de vapor y aire; y cómo reducir los problemas de disposición de desperdicios y los costos de manipulación.

Página 147

Instalación de Chamuscado de Alta Velocidad. El proceso de chamuscado se usa para quemar la pelusilla o fibras salientes de la superficie de las telas de gabardinas y otros géneros que requieran un acabado uniforme, y se realiza generalmente en géneros crudos antes del procedimiento de elaboración en húmedo. La Bachmann Uxbridge Worsted Corp. está usando en la actualidad equipo chamuscador a velocidad de 100 yardas por minuto. La firma ha encontrado que el método produce un acabado más liso a menor costo que cuando se usa tundidura de crudos.

Página 149

Fábrica Suiza Utiliza el Calor Residual Diesel. La instalación de un conjunto motogenerador Diesel ha permitido a la Sennhof Cotton Mill, de Winterthur, Suiza, utilizar alrededor del 76 por ciento del calor total disponible en su combustible para hacer funcionar y calentar su fabrica y parte de la villa en que está la hilatura. El sistema, descrito por los ingenieros como "tan bueno como el mejor," utiliza el calor del agua de enfriamiento y de los gases del escape para calentar el aire, así como para la producción de electricidad.

une besogne de mélange parfaite, chacune ajoutant une petite quantité de fibres, exactement pesées, au mélange total. L'auteur donne comme exemple une usine de rayonne, une de coton et une de laine qui firent respectivement des économies de $32.000, de $12.500 et de la moitié du temps consacré autrefois par des systèmes de mélanges différents, grâce au système actuel de mélange automatique par mélangeuses montées en série.

Page 143

La construction bien étudiée d'une usine comme facteur dans la réduction du prix de revient d'un apprêt. L'auteur décrit l'importance du choix judicieux de l'emplacement futur d'une usine d'apprêts et de l'influence que ce choix aura sur le prix de revient des marchandises traitées dans cette usine. Il parle de la nécessité qu'il y a à construire une usine en se basant sur le produit à fabriquer; il décrit l'intérêt qu'il y a à choisir des matériaux nouveaux et meilleurs qui réduiront les frais d'entretien de l'usine; d'étudier soigneusement les nécessités d'aération et de chauffage; et enfin, de réduire au minimum les frais de manutention et ceux résultant de l'enlèvement des déchets.

Page 147

Grilleuse à grande vitesse. Ce grillage s'emploie pour brûler le duvet à la surface de tissus pour gabardines et autres genres qui demandent une surface absolument lisse. Il s'applique d'ordinaire avant que les tissus ne soient traités au mouillé. La Bachmann Uxbridge Worsted Corp. utilise du matériel de grillage marchant à 100 yards à la minute. Elle a trouvé que ce système lui permet de produire des surfaces plus nettes que par la méthode du tondage.

Page 149

Les pertes de chaleurs d'un moteur Diesel sont utilisées par une usine suisse. L'usine de coton Sennhof à Winterthur, Suisse, récupère 76% de la chaleur disponible dans le combustible utilisé par un groupe de génératrice-Diesel et emploie cette chaleur pour chauffer l'usine et une partie des maisons-ouvrière qui s'y rattache. Ce système, que des ingénieurs ont décrit comme représentant le maximum que l'on peut atteindre à l'heure actuelle, utilise la chaleur de l'eau de refroidissement, ainsi que celle présente dans les gaz d'échappement, pour chauffer les salles de l'usine et pour la production d'électricité.

ter gleichzeitiger Hinzufuegung von kleinen proportionierten Zugaben von automatisch gewogenem Stapel. Der Autor zeigt, wie eine Kunstseiden-, eine Woll- und eine Baumwollfabrik ihre Mischungen verbessert und $32,-000, resp. $12,500 erspart haben, und nur die Haelfte der szt. benoetigten Stunden gegenueber der alten Mischmethode brauchten, sobald automatische Zufuhr und Mischleitungen in Betrieb gesetzt werden.

Seite 143

Entwurf fuer eine Betriebsanlage verringert Appreturkosten. Es wird darauf hingewiesen, dass eine gut geplante Anlage einer Appretur, zukuenftige Betriebs- und Erhaltungskosten verringern kann; der Autor dieses Artikels befasst sich mit der Wichtigkeit der Auswahl des Baugrundes, Entwurf des Gebaeudes, Verwendung von neuen und besseren Materialien, um zukuenftige Instandhaltungskosten fuer lange Zeit niedrig zu halten. Vorsorge zur Verminderung der Abfallvernichtungsprobleme und Handhabungskosten werden behandelt.

Seite 147

Hochtourige Sengeinrichtung. Der Sengungsprozess wird zum Abbrennen des Flaumes oder der abstehenden Fasern auf der Stoffoberflaeche von Gabardin oder anderen Fabrikaten, die Glaette haben sollen, verwendet, und wird gewoehnlich an Rohwaren, vor der Nassappretur, durchgefuehrt. Bachmann Uxbridge Worsted Corp., verwendet jetzt Sengungsequipment mit einer Geschwindigkeit von 100 Yards pro Minute. Es wurde festgestellt, dass dieses Verfahren eine glattere Oberflaeche als durch Scheren der Rohware zu geringeren Kosten ermoeglicht.

Seite 149

Schweizer Fabrik verwendet ueberschuessige Diesel Waerme. Die Aufstellung einer Diesel-Generatorenanlage ermoeglicht es der Sennhof Baumwollfabrik, Winterthur, Schweiz, ca. 76% der Gesammtheizung ihrer verfuegbaren Kraft nicht nur zum Betrieb und zur Erwaermung ihrer Fabrik zu verwenden, sondern auch einen Teil den Arbeitshaeusern der Ortschaft zur Verfuegung zu stellen. Das System wird von Ingenieuren als gegenwaertig das "Beste" unter den gegebenen Verhaeltnissen beschrieben, insofern als auch Gebrauch von der Hitze des Speicherwassers und der Auspuffdaempfe fuer die Raumheizung und die Erzeugung von Elektrizitaet gemacht wird.

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